

October 23, 2013

***VIA ELECTRONIC FILING  
AND OVERNIGHT DELIVERY***

Washington Utilities and Transportation Commission  
1300 S. Evergreen Park Drive SW  
P.O. Box 47250  
Olympia, WA 98504-7250

Attention: Steven V. King  
Executive Director and Secretary

**RE: Docket UE-111880 – PacifiCorp’s Demand Side Management Business Plan Revisions**

Pursuant to Docket UE-111880, Order 01, Conditions (6)(d) and (8)(b) PacifiCorp, d/b/a Pacific Power & Light Company (PacifiCorp or Company) submits to the Washington Utilities and Transportation Commission (Commission) revisions to its Demand Side Management (DSM) Business Plan. The DSM Business Plan was originally provided as Appendix 7, in the Ten-Year Achievable Conservation Potential and Biennial Conservation Target for 2012 and 2013 filed with the Commission on January 31, 2012, and updated with the Commission on June 4, 2012, and again on November 1, 2012. Attached please find one original and two copies of PacifiCorp’s Revised DSM Business Plan.

As outlined in Condition (5) of Order 01, Docket UE-111880, PacifiCorp is required to maintain its conservation tariffs on file with the Commission. That condition states, “[p]rogram details about specific measures, incentives and eligibility requirements must be filed as tariff attachments or as revisions to PacifiCorp’s DSM Business Plan.” The enclosed revised DSM Business Plan reflects revisions to Schedule 115 – FinAnswer Express and Schedule 118 – Home Energy Savings.

Changes to Schedule 115 – FinAnswer Express address updates needed to align this schedule with the Washington State Energy Code and market data. Consistent with the change process for the FinAnswer Express program documented and approved in Advice 06-08 (Docket UE-061710), changes were presented to the DSM Advisory Group, positive feedback was received, and notice of the changes was posted on the program website<sup>1</sup> 45 days prior to implementation. The changes went into effect on Friday, September 6, 2013.

The FinAnswer Express program changes are summarized in Table 1 below.

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<sup>1</sup> <http://www.pacificpower.net/wattsmart>

**Table 1**  
**Summary of Changes to Washington FinAnswer Express**

<b>Measure Category</b>	<b>Description of Change</b>	<b>Reason for Change</b>
Building Envelope – new construction, major renovation	Discontinue incentives for wall insulation.	WSEC 2012 requirements for wall insulation have increased to the point where additional insulation above code effectively results in no energy savings.
Compressed Air	Add a measure cost cap to the air compressor VFD measure.	To add clarification that incentives are capped at the measure cost to align with the intent for this measure.

Changes to Schedule 118 – Home Energy Savings address updates needed to align this schedule with the Washington State Energy Code. One new construction measure was retired. Proposed changes were circulated to the DSM Advisory Group, comments were incorporated, notice was posted on the website<sup>2</sup> for 45 days, and changes went into effect on September 20, 2013.

The Home Energy Savings program changes are summarized in Table 2 below.

**Table 2**  
**Summary of Changes to Washington Home Energy Savings**

<b>Measure Category</b>	<b>Description of Change</b>	<b>Reason for Change</b>
New Home CFLs	Remove existing measure.	New 2012 WSEC requires efficient lighting installation in new homes.

These changes are not likely to have material impacts on energy savings, program costs, or program cost effectiveness. There are no updated forecasts or cost effectiveness results included in this revised DSM Business Plan.

Please direct any informal inquiries regarding this filing to Gary Tawwater at 503-813-6805.

Sincerely,



Kathryn Hymas  
Vice President of RMP Finance and Demand Side Management

Enclosures

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<sup>2</sup> <http://www.pacificpower.net/wattsmart>

# Demand-side Management 2012-2013 Business Plan - Washington

Revision 3, October 21, 2013



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## **Executive Summary**

On January 31, 2012, PacifiCorp (the “Company”) filed its 2012-2013 Biennial Conservation Plan (“BCP”) and accompanying Washington Demand-side Management Business Plan (“Business Plan”) with the Washington Utilities and Transportation Commission (the “Commission”) in Docket UE-111880. The plans were approved by the Commission during open meeting on April 12, 2012. As defined in Order 01 in Docket UE-111880, the Company is required to maintain current versions of program tariffs and descriptions as well as detailed information on program measures, incentives, customer eligibility requirements and annual conservation savings and budget projections on file with the Commission. Maintaining an up-to-date biennium Business Plan is the Company’s primary vehicle in meeting this requirement.

On June 1, 2012, the Company filed its first revision the 2012-2013 Business Plan reflecting changes to the FinAnswer Express and Home Energy Savings Programs, introducing a Home Energy Report program, and discontinuing Schedule 113, the Energy Education in Schools program. In addition, Order 01 in Docket UE-111880 limited the recovery of distribution and production efficiency costs through Schedule 191 - DSM System Benefits Charge Adjustment (DSM Surcharge) to assessment study costs only and only through 2013. The June 1, 2012, revisions to the Business Plan reflected all of these changes.

Order 01 in the above referenced docket also requires the Company to file with the Commission any modifications to the Business Plan for 2013 by November 1, 2012. Specifically, paragraph 29 requires the Company to do the following:

By November 1, 2012, (file) any proposed revisions to the 2013 DSM Business Plan. The filing should contain any changes to program details and an annual budget.

In compliance with this requirement the Company makes the following second revision to the 2012-2013 Business Plan. This revision reflects the following:

- 1) Updated savings projections and budgets by program for 2012 and 2013. Table 1 provides the Company’s current savings and cost projections based on year-to-date activity through September 2012, and forecasts based on the best available information for the remainder of 2012 and for the entirety of 2013.
- 2) Information (description and costs) on the Company’s replacement program for Schedule 113, the Energy Education in Schools program, which was cancelled at the end of the 2011-12 school year. The new Energy Education in Schools program is positioned as an “education only” program and will be funded by revenues collected through the DSM Surcharge. Program costs will fall under Paragraph (7)(d) in Order 01 of Docket UE-111880, Conservation Efforts without Approved EM&V Protocol.
- 3) Information on proposed changes to the Company’s Energy FinAnswer program, filed as a separate program modification advice filing concurrent with this revised Business Plan filing. The proposed change to the Energy FinAnswer program is in response to Order 02, in Docket UE-111880, which directs the Company, with input from stakeholders, to investigate conservation program design for large industrial customers and implement changes to the Company’s program no later than November 1, 2012.

The Business Plan organizationally includes a section for each DSM program with the following information:

- Program, initiative and/or project descriptions
- Description of planned program changes
- Program evaluation update<sup>1</sup>
- Program details including specific measures, incentives, and eligibility requirements

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<sup>1</sup> Final evaluation reports are available at the Company's website: <http://www.pacificorp.com/es/dsm/washington.html>.

## 2012-2013 Budget and Savings by Program

Table 1 below provides revised projected savings and expenditures by program, initiative, and proposed program or activity to achieve the **8.7 to 9.0 aMW** biennium target for 2012 and 2013 as described in the Company's BCP, dated January 31, 2012. While 2012 and 2013 business plan calendar year forecasts (in Table 1) are not in exact alignment with the 2012 and 2013 conservation forecasts for the same years, the total forecasted acquisitions over the biennium period represent resources equal to or greater than the Company's 2012-2013 biennium target savings. In this update, the 2012 forecasts for savings and costs represent actual reported results through September, 2012, and revised forecasted results for the remainder of 2012 and for the entirety of 2013. Notable differences in savings and costs in Table 1 values from those provided in the June, 2012, update are shown in Tables 2 and 3 below.

**Table 1**  
**2012 – 2013 Biennium Target Savings and Budget Projections by Program**

Program	2012 PacifiCorp Washington Conservation Estimates				2013 PacifiCorp Washington Conservation Estimates				2012 + 2013
	Gross kWh/Yr Savings @site	Gross kWh/Yr Savings @gen	Gross aMW Savings @gen	Estimated Expenditures	Gross kWh/Yr Savings @site	Gross kWh/Yr Savings @gen	Gross aMW Savings @gen	Estimated Expenditures	Gross aMW Savings @gen
Low Income Weatherization (114) <sup>note 1</sup>	224,480	246,187	0.03	\$ 600,000	261,280	286,546	0.03	\$ 700,000	0.06
Refrigerator Recycling (107) <sup>note 2</sup>	1,071,071	1,174,644	0.13	\$ 220,748	1,570,471	1,722,336	0.20	\$ 314,525	0.33
Home Energy Savings (118) <sup>note 3</sup>	6,030,890	6,614,077	0.76	\$ 1,356,699	8,666,986	9,505,084	1.09	\$ 1,674,970	1.84
Home Energy Reports (N/A) <sup>note 4</sup>	1,176,000	1,289,719	0.15	\$ 100,469	4,604,000	5,049,207	0.58	\$ 132,120	0.72
<b>Total Residential</b>	<b>8,502,441</b>	<b>9,324,627</b>	<b>1.06</b>	<b>\$ 2,277,916</b>	<b>15,102,737</b>	<b>16,563,172</b>	<b>1.89</b>	<b>\$ 2,821,615</b>	<b>2.96</b>
Energy FinAnswer (125)	2,153,377	2,358,615	0.27	\$ 532,927	2,162,985	2,369,139	0.27	\$ 544,976	0.54
FinAnswer Express (115)	8,200,000	8,981,542	1.03	\$ 1,774,577	7,031,500	7,701,672	0.88	\$ 1,567,351	1.90
<b>Total Commercial</b>	<b>10,353,377</b>	<b>11,340,157</b>	<b>1.29</b>	<b>\$ 2,307,504</b>	<b>9,194,485</b>	<b>10,070,811</b>	<b>1.15</b>	<b>\$ 2,112,327</b>	<b>2.44</b>
Energy FinAnswer (125)	9,621,570	10,406,786	1.19	\$ 1,890,809	14,194,811	15,353,250	1.75	\$ 2,557,668	2.94
FinAnswer Express (115)	1,800,000	1,946,898	0.22	\$ 467,659	1,543,500	1,669,465	0.19	\$ 413,048	0.41
<b>Total Industrial</b>	<b>11,421,570</b>	<b>12,353,684</b>	<b>1.41</b>	<b>\$ 2,358,468</b>	<b>15,738,311</b>	<b>17,022,715</b>	<b>1.94</b>	<b>\$ 2,970,716</b>	<b>3.35</b>
Energy Education in Schools <sup>note 5</sup>	-	-	-	\$ 337,384	-	-	-	\$ 82,000	-
Northwest Energy Efficiency Alliance <sup>note 6</sup>	8,776,000	9,601,951	1.10	\$ 1,157,000	8,766,000	9,592,455	1.10	\$ 1,212,456	2.19
Distribution efficiency	1,138,800	1,192,292	0.14	\$ 132,000	1,077,480	1,127,820	0.129	\$ -	0.265
Production efficiency	23,100	23,100	0.003	\$ 246,773	54,120	54,120	0.006	\$ -	0.01
<b>Total - conservation programs</b>	<b>40,215,287</b>	<b>43,835,811</b>	<b>5.00</b>	<b>\$ 8,817,045</b>	<b>49,933,133</b>	<b>54,431,092</b>	<b>6.21</b>	<b>\$ 9,199,114</b>	<b>11.22</b>
Customer outreach/communication	-	-	-	\$ 250,000				\$ 250,000	-
Program Evaluations <sup>note 7</sup>	-	-	-	\$ 669,870				\$ 516,000	
Potential study update/analysis <sup>note 8</sup>	-	-	-	\$ 117,336				\$ -	
Measure data documentation <sup>note 9</sup>	-	-	-	\$ 5,360				\$ 16,696	
Res. admin. of prior programs <sup>note 10</sup>				\$ 1,600				\$ 1,600	-
<b>Total System Benefit Charge Expenses<sup>note 11</sup></b>	<b>40,215,287</b>	<b>43,835,811</b>	<b>5.00</b>	<b>\$ 9,861,211</b>	<b>49,933,133</b>	<b>54,431,092</b>	<b>6.21</b>	<b>\$ 9,983,410</b>	<b>11.22</b>

### Table Notes:

- The Low Income Weatherization forecast for 2013 is based on an average of actual 2012 program spending through September, 2012, ramped up in anticipation of expanded agency services based on the level of MatchMaker program funding that was distributed by the Department of Commerce in July, 2012. The Company maintains \$1

million annually available for matching commitments as this is the funding cap included in the program tariff, Schedule 114.

2. Refrigeration recycling unit energy savings have been adjusted for the 2012 and 2013 reporting periods based on new information from the program's 2009-2010 Washington impact evaluation. The new information was incorporated into an RTF approved calculation to arrive at the revised unit energy savings for each appliance type (refrigerators and freezers). The effect of this new information is a downward adjustment in the Company's initial ten-year forecast. The adjustment is further explained in "Appendix 4, Additional Detail – Forecast Adjustments" to the Company's BCP.
3. Compact fluorescent lighting in the Home Energy Savings program assumes a reduction in burn hours consistent with RTF (reduced from 2.3 hours to 1.9 hours) and a non-install factor of 36 percent for twisters, 20 percent for specialty bulbs. In addition to these two adjustments, the Company has made an adjustment to reflect the interaction between efficient lighting and space conditioning equipment. The effect of this adjustment is an additional downward adjustment in the Company's initial ten-year forecast, biennium target and program specific savings forecast provided September 15, 2011. The adjustment is further explained in "Appendix 4, Additional Detail – Forecast Adjustments" to the Company's BCP.
4. Net savings are forecasted for the Home Energy Reports program to avoid double counting of savings attributed to other programs. Savings in Table 1 represent forecast only, program reporting will not begin until November, 2012, due to timing of program launch (August, 2012). Actual savings for the purpose of reporting towards the achievement of the Company's 2012-2013 biennium target will be based on third-party ex-post verification scheduled to be completed prior to the June, 2014, biennium report for 2012-2013.
5. No savings will be reported from the Energy Education in School program(s). Costs for 2012 reflect final costs of Schedule 113, the "energy and savings" program that ended with the 2011-12 school year, and costs associated with the introduction/year 1 implementation of the Company's "education only" program.
6. Northwest Energy Efficiency Alliance ("NEEA") costs are based on PacifiCorp's percent of regional funding for the 2010-2014 funding cycle. NEEA provided a revised forecast on October 16, 2012, for the purpose of this update. For the purpose of tracking Company progress towards biennium targets, the Company discounts NEEA's saving forecast by 15-percent to account for forecasting uncertainties and NEEA's evolving attribution methodology.
7. For more detail on the planned evaluations, see the program detail sections in this Business Plan or Appendix 8 to the BCP and evaluation updates noted in the Program Detail sections in this Business Plan.
8. Potential study update and analysis costs represent the costs necessary to prepare for the 2014-2023 ten-year conservation forecast and 2014-2015 biennium target. These costs are subject to change as new requirements become necessary.
9. Measure data documentation costs reflect Washington's allocation of the contract costs for the completion of a system-wide conservation program technical reference database.
10. Residual administration related to prior program expense represents the ongoing management of the conservation loans associated with legacy loan programs i.e. Energy FinAnswer and Home Comfort.
11. The biennium target for distribution efficiency is presented within the BCP is provided as a saving range rather than a fixed point estimate, to account for unknowns associated with Voltage Optimization measurement and verification.

## **Notable DSM Business Plan Changes**

### *Savings Changes*

Highlights of notable change from the savings projections included in the Business Plan filed in Docket UE-111880 on June 1, 2012 include:

- Home Energy Savings - Reduction in forecast due to realignment of reported unit energy savings with conservation potential planning unit energy savings assumption for CFLs, coupled with a slowdown in weatherization and appliance activity.
- FinAnswer Express – Acceleration of commercial lighting projects due to advancing federal lighting standards; the focus the market is putting on early change-outs.
- Energy FinAnswer – Improvement in pipeline position (projects scheduled for completion) mostly associated with work in the fruit storage processing sector.



- NEEA – The change is a combination of a shift in savings mix from the residential sector to commercial sector (decline in CFL and white goods but an increase in savings from 80 Plus and commercial codes) and a correction in the adjustment/forecast associated with local programs (prior NEEA forecast inadvertently deducted code savings as if they were a part of Pacific Power’s local programs).

**Table 2  
June, 2012 Business Plan Savings Forecast compared to Current Forecast**

	<b>Business Plan June 1</b>	<b>Business Plan Update</b>	
	<b>2012-2013</b>	<b>2012-2013</b>	<b>Variance</b>
<b>Program (Tariff Schedule Number)</b>	<b>Gross aMW Savings @ gen</b>		
Low Income Weatherization (114)	0.07	0.06	(0.01)
Refrigerator Recycling (107)	0.35	0.33	(0.02)
Home Energy Savings (118)	2.06	1.84	(0.22)
Home Energy Reports (N/A)	0.72	0.72	0.01
CFL Adjustment			-
<b>Total Residential</b>	<b>3.20</b>	<b>2.96</b>	<b>(0.25)</b>
Energy FinAnswer (125)	0.37	0.54	0.17
FinAnswer Express (115)	1.26	1.90	0.65
<b>Total Commercial</b>	<b>1.63</b>	<b>2.44</b>	<b>0.82</b>
Energy FinAnswer (125)	2.11	2.94	0.83
FinAnswer Express (115)	0.48	0.41	(0.06)
<b>Total Industrial</b>	<b>2.59</b>	<b>3.35</b>	<b>0.76</b>
Energy Education in Schools	-	-	-
Northwest Energy Efficiency Alliance	2.00	2.19	0.19
Distribution efficiency	0.346	0.265	(0.08)
Production efficiency	0.009	0.009	-
<b>Total Other Initiatives</b>	<b>2.35</b>	<b>2.46</b>	<b>0.11</b>
<b>Total Company Conservation Program</b>	<b>9.77</b>	<b>11.22</b>	<b>1.44</b>

*Budget Changes*

Highlights of notable change from the budget projections included in the Business Plan filed in Docket UE-111880 on June 1, 2012 include:

- Low Income Weatherization – Lower expenses are attributed to decrease in savings forecast resulting from decrease in DOE and LIHEAP funding and associated impacts on agency staffing/weatherization work.
- Home Energy Savings – Reduction in costs due to slowdown in weatherization and appliance activity (and associated/variable administrative costs).
- Energy FinAnswer – Increased closure rate of existing pipeline of projects is resulting in lower energy engineering study expenses as percent of savings realized.

- FinAnswer Express – Acceleration of commercial lighting projects due to advancing federal lighting standards; the focus the market is putting on early change-outs.
- Energy Education In Schools – Costs are a combination of final costs of Schedule 113 “education and savings” program and refined pricing (based on contract pricing) for replacement “education only” program. 2013 costs are most representative of future “education only” program costs. Although the program expenditures are forecasted to be greater than those identified in the June 1, 2012, Business Plan update overall they are down \$452,500 from the initial January 31, 2012 Business Plan forecast (\$872,000 compared to \$419,500) over the 2012-2013 biennium period.
- Distribution Efficiency – Reduction in forecasted expense is the result of moving from a preliminary forecast of study costs to known/final study cost/pricing.
- Production Efficiency – Reduction in forecasted expense is the result of moving from a preliminary forecast of study costs to known/final study cost/pricing.
- Measure data documentation – Reduction in forecasted expense is the result of moving from a pre-procurement to post-procurement forecast for the work.

**Table 3**

**June, 2012 Business Plan Expenditure Forecast compared to Current Forecast**

	<b>Business Plan June 1 2012-2013</b>	<b>Business Plan Update 2012-2013</b>	<b>Variance</b>
<b>Program (Tariff Schedule Number)</b>	<b>Estimated Expenditures</b>		
Low Income Weatherization (114)	\$1,648,000	\$1,300,000	(\$348,000)
Refrigerator Recycling (107)	\$600,000	\$535,273	(\$64,727)
Home Energy Savings (118)	\$3,401,040	\$3,031,669	(\$369,371)
Home Energy Reports (N/A)	\$250,791	\$232,589	(\$18,202)
CFL Adjustment			\$0
<b>Total Residential</b>	<b>\$5,899,831</b>	<b>\$5,099,531</b>	<b>(\$800,300)</b>
Energy FinAnswer (125)	\$978,000	\$1,077,903	\$99,903
FinAnswer Express (115)	\$2,120,241	\$3,341,928	\$1,221,687
<b>Total Commercial</b>	<b>\$3,098,241</b>	<b>\$4,419,831</b>	<b>\$1,321,590</b>
Energy FinAnswer (125)	\$4,996,000	\$4,448,477	(\$547,523)
FinAnswer Express (115)	\$815,229	\$880,707	\$65,478
<b>Total Industrial</b>	<b>\$5,811,229</b>	<b>\$5,329,184</b>	<b>(\$482,045)</b>
Energy Education in Schools	\$250,000	\$419,384	\$169,384
Northwest Energy Efficiency Alliance	\$2,369,456	\$2,369,456	\$0
Distribution efficiency	\$341,400	\$132,000	(\$209,400)
Production efficiency	\$588,800	\$246,773	(\$342,027)
<b>Total Other Initiatives</b>	<b>\$3,549,656</b>	<b>\$3,167,613</b>	<b>(\$382,043)</b>
Outreach and Communications	\$500,000	\$500,000	\$0
Program Evaluations	\$1,254,000	\$1,185,870	(\$68,130)
Potential study update/analysis	\$95,000	\$117,336	\$22,336
Measure data documentation	\$250,000	\$22,056	(\$227,944)
Res. admin of prior programs	\$3,000	\$3,200	\$200
<b>Total Company Conservation Program</b>	<b>\$20,460,957</b>	<b>\$19,844,621</b>	<b>(\$616,336)</b>

## **Residential Program Details**

The Company's residential programs in Washington include Refrigerator Recycling (Schedule 107), Home Energy Savings (Schedule 118) and more recently Home Energy Reports.

### **Refrigerator Recycling (Schedule 107)**

#### **Years of Implementation**

PacifiCorp Electric Service Schedule No. 107 for the Residential Refrigerator Recycling Program was submitted under Advice Letter No. 05-004 on March 1, 2005. The program was originally approved with an effective date April 1, 2005.

#### **Program Description**

This program, operating as the See ya later, refrigerator® program, aims to decrease residential refrigeration loads by reducing the number of inefficient secondary and primary refrigerator and freezer models in operation. With this program, the Company offers all residential customers in Washington the opportunity to receive an incentive (by check mailed within 30 days after collection of the unit to be recycled) in exchange for turning in their old but working refrigerators and/or freezers for recycling. Each customer can recycle up to two units, refrigerators and/or freezers, per household. In addition, a kit with instant energy-saving measures is provided to each participating customer. Customers can schedule a free pick-up online at:

<http://www.pacificpower.net/res/sem/epi/washington/roa.html>.

#### **Planned Program Changes**

There are no further changes planned for the refrigerator recycling program for the remainder of the 2012 and 2013 calendar periods. Deemed values for refrigerator, freezer and kit savings were updated in the June 1, 2012 Business Plan update based on the latest Regional Technical Forum ("RTF") data and 2009 and 2010 impact evaluation results. Per unit refrigerator savings changed from 1,250 gross kWh to 723 gross kWh. Freezer savings also were lowered from 1,853 gross kWh per recycled freezer to 542 gross kWh. Relying on historical data of the ratio of refrigerators to freezers recycled, a weighted per unit deemed savings amount of 687 kWh is assumed for all refrigerators or freezers recycled through the program. Using current RTF data for non-installation and operating hours, kit savings, which include two 13W CFLs, were lowered from 72 gross kWh per kit to 23 gross kWh per kit.

#### **Evaluation Update**

##### ***Last Evaluation Report:***

**Program Years**  
2009-2010

**Evaluation Report Date**  
January 6, 2012

**Completed by**  
The Cadmus Group

##### ***Future Evaluation Report(s):***

**Program Years**  
2011-2012

**Evaluation Report Date**  
By Year-end 2013

**To be Completed by**  
The Cadmus Group

### Program Details

Details for this program are contained in the program tariff. Any changes to the details included in the program tariff must be filed and approved by the Commission prior to becoming effective.

**PACIFIC POWER & LIGHT COMPANY**

WN U-75

Original Sheet No. 107.1

**Schedule 107**

**RESIDENTIAL REFRIGERATOR RECYCLING PROGRAM – RESIDENTIAL SERVICE OPTIONAL FOR QUALIFYING CUSTOMERS**

**PACIFIC POWER & LIGHT COMPANY**

WN U-75

Original Sheet No. 107.1

**Schedule 107**

**RESIDENTIAL REFRIGERATOR RECYCLING PROGRAM – RESIDENTIAL SERVICE OPTIONAL FOR QUALIFYING CUSTOMERS**

PURPOSE:

Service under this tariff is intended to decrease residential refrigeration loads through the removal and recycling of inefficient models.

AVAILABLE:

In all territory served by Pacific Power (The Company) in the State of Washington.

APPLICABLE:

To residential customers and landlords with residential units in all service territory served by The Company in Washington.

CUSTOMER PARTICIPATION:

Customer participation is voluntary and is initiated by contacting a specified toll-free number or website.

DESCRIPTION:

Customers receive a \$30 incentive to discontinue use of their working second refrigerators and/or freezers or to replace their working primary refrigerators and freezers with new more efficient models. To qualify for the incentive, customers must give up their appliances for recycling. Appliances will be collected and recycled to ensure they are not resold on the secondary market. Company will offer a packet with written energy efficiency information, and instant savings measures.

QUALIFYING EQUIPMENT:

Working refrigerators and freezers that are a minimum of 10 cubic feet in size, utilizing inside measurements.

PROVISIONS OF SERVICE:

Incentives will be available on a maximum of two appliances per qualifying household. Incentive checks will be mailed within 30 days of the appliance collection date.

Incentives are also available to landlords who own the appliances used in rental properties in The Company's Washington service territory where their tenant is billed on a residential schedule. Landlords may receive incentives on a maximum of two appliances per unit.

**Issued:** May 13, 2011

**Effective:** June 13, 2011

**Advice No.** 11-01

**Issued By Pacific Power & Light Company**

By: Andrea Kelly Andrea L. Kelly

**Title:** Vice President, Regulation

Company and/or Program Administrator may employ a variety of quality assurance techniques during the delivery of the program. Verification or evaluation may include, but is not limited to, telephone survey, site visit, billing analysis, and pre- and post-installation of monitoring equipment as necessary to quantify actual energy savings.

**RULES AND REGULATIONS:**

Service under this Schedule is subject to the General Rules and Regulations contained in the tariff of which this Schedule is a part, and to those prescribed by regulatory authorities.

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**Issued:** May 13, 2011

**Effective:** June 13, 2011

**Advice No.** 11-01

**Issued By Pacific Power & Light Company**

By: Andrea Kelly Andrea L. Kelly

**Title:** Vice President, Regulation

## **Home Energy Savings (Schedule 118)**

### **Years of Implementation**

PacifiCorp Electric Service Schedule No. 118 for the Home Energy Savings Program was submitted under Advice Letter No. 06-004 on August 11, 2006. The program was initially approved with an effective date of September 14, 2006.

### **Program Description**

The program provides a broad framework to deliver incentives for more efficient products and services for Washington residential customers with a new or existing home, multi-family unit or manufactured home. A third party administrator hired by the Company delivers the savings and incentives of the program. Operating in tandem, Schedule 118 and the program website (<http://www.homeenergysavings.net>) inform customers and contractors of the offerings and qualifications for incentives.

Measures eligible for incentives include clothes washers, clothes washer recycling, refrigerators, freezers, heat pump water heaters, water heaters, dishwashers, compact fluorescent lights (“CFL”) and light emitting diode (“LED”) lighting, lighting fixtures (CFL and LED), heating and cooling equipment, insulation and windows. In addition, the program includes a Builder Option Package as well as stand-alone measures for new homes. Complete details on incentives and services are on the program website and in the tables and copy of the program tariff below.

### **Planned Program Changes**

One program change was made in September 2013 to comply with recent state energy code changes. This October 2013 Business Plan was updated with the retirement and removal of the New Homes CFL incentive.

### **Evaluation Update**

#### ***Last Evaluation Report:***

**Program Years**  
2009-2010

**Evaluation Report Date**  
January 13, 2012

**Completed by**  
The Cadmus Group

#### ***Future Evaluation Report(s):***

**Program Years**  
2011-2012

**Evaluation Report Date**  
By Year-end 2013

**To be Completed by**  
The Cadmus Group

### **Program Details**

General program details are contained in the program tariff; additional program detail is available on the program website. Any changes to the details included in the program tariff must be filed and approved by the Commission prior to becoming effective. In addition, measure level program details are managed outside of the program tariff. The program tariff and excerpt, provided below, from the advice letter in Docket UE-061297, filed August 11, 2006, describe the information managed outside of the tariff and the process for making program changes.

*The comprehensive nature of the program and changing equipment standards indicate a flexible and market-driven program delivery is required. The Company is proposing that Schedule 118 outline the basic program elements including customer eligibility, use of a program administrator for delivery, the seasonal nature of selected incentive offers, and that current incentive levels may change. Specific details such as incentive levels, eligible equipment specifications and dates for incentive availability would be managed by the program administrator using a dedicated program Web site with easy links from the Company web site.*

*Changes in equipment eligibility or minimum efficiency levels would be driven by program and market data. The Company and program administrator will be assessing program performance on an on-going basis and proposing changes at least once per year. Changes may be proposed more frequently if there is compelling market feedback that changes need to occur ahead of the annual changes. Similar to the filing process, the Company would present information on proposed changes to its Advisory Group and seek comments prior to making changes. Changes in equipment specifications or incentive levels would be clearly posted on the Web site and emailed to the appropriate Commission staff person with at least 45 days advance notice.*

Program details, including specific measures, incentives, and eligibility requirements are provided below and are available on the Company's website at [www.pacificpower.net/wattsmart](http://www.pacificpower.net/wattsmart) (program details include copy of program tariff).

## **Washington Home Energy Savings**

### Definitions

**British Thermal Unit (Btu):** It is approximately the amount of energy needed to heat 1 pound of water from 39° to 40° Fahrenheit.

**Compact Fluorescent Lamp (CFL):** Light bulbs that produce light much more efficiently than traditional incandescent light bulbs.

**Cubic Feet per Minute (CFM):** A measurement of the velocity at which air flows into or out of a space.

**Customer:** Any party who has applied for, been accepted and receives service at the real property, or is the electricity user at the real property.

**Energy Efficiency Incentive:** Payments of money made by Pacific Power to Owner or Customer for installation of an Energy Efficiency Measure pursuant to an approved Energy Efficiency Incentive Application.

**Energy Efficiency Measure (EEM):** A permanently installed measure which can improve the efficiency of the Customer's electric energy use.



**Energy Factor (EF):** Indicates a water heater's overall energy efficiency based on the amount of hot water produced per unit of fuel consumed over a typical day. The higher the energy factor, the more efficient the water heater.

**Heating Seasonal Performance Factor (HSPF):** The efficiency of heat pumps measured by the ratio of Btu heat output over the heating season to watt-hours of electricity used. The higher the number, the greater the efficiency.

**Heating, Ventilation and Air Conditioning (HVAC):** Refers to technology of indoor environmental comfort.

**Light-Emitting Diodes (LED):** Light bulbs that produce light much more efficiently than traditional incandescent and compact fluorescent light bulbs.

**Manual J:** Manual J, "Residential Load Calculation," published by the Air Conditioning Contractors of America (ACCA), is the recommended method for sizing heating and cooling systems for use in the United States.

**Mid-Market:** An approved third party (typically a contractor, retailer or manufacturer) who installs Energy Efficiency Measures at the real property or sells Energy Efficiency Measures to a Customer.

**Modified Energy Factor (MEF):** Measures energy consumption of the total laundry cycle (washing and drying). It indicates how many cubic feet of laundry can be washed and dried with one kWh of electricity; the higher the number, the greater the efficiency.

**New Home:** A newly constructed residence.

**Owner:** The person who has both legal and beneficial title to the real property, and is the mortgager under a duly recorded mortgage of real property, the trustor under a duly recorded deed of trust.

**Prescriptive incentives:** Per unit incentives are listed in the program incentive tables for specific EEMs. Incentives are subject to change.

**R-Value:** Indicates insulation's resistance to heat flow. The higher the R-value, the greater the insulating effectiveness.

**Seasonal Energy Efficiency Ratio (SEER):** Is the efficiency of air conditioners measured by the cooling output in Btu during a typical cooling-season divided by the total electric energy input in watt-hours during the same period. The higher the unit's SEER rating the more energy efficient it is.

**Thermal Expansion Valve (TXV):** A component in refrigeration and air conditioning systems that controls the amount of refrigerant flow into the evaporator thereby controlling the superheating at the outlet of the evaporator.

**U-Factor:** Measures the rate of heat transfer and indicates how well the window insulates. U-factor values generally range from 0.25 to 1.25 and are measured in Btu/h·ft<sup>2</sup>·°F. The lower the U-factor, the better the window insulates.

### Incentives

**Home Energy Savings Incentive Table<sup>2</sup>**

Measure	Qualifications	Customer Incentive	Mid-Market or Contractor Incentive
<b>Appliances</b>			
Clothes Washers	MEF $\geq$ 2.46 & WF $\leq$ 4.0	\$50	\$0
Clothes Washer Recycling	Requires recycling documentation and requires customer to submit incentive application for a new qualified clothes washer	\$0	\$25
Dishwashers	CEE Tier 1 for standard models, compact dishwasher models are not qualified	\$20	\$0
Refrigerators	CEE Tier 2 and above	\$35	\$0
Electric Water Heaters	40-49 gallon and $\geq$ EF 0.94; 50-65 gallon and $\geq$ EF 0.95; 66 gallon+ and $\geq$ EF 0.93	\$75	\$50
Evaporative Coolers (permanently installed)	Minimum 3,500 CFM	\$150	\$100
Evaporative Coolers (portable)	Minimum 2,000 CFM	\$100	\$0
Room Air Conditioner	ENERGY STAR qualified	\$25	\$0
Freezer	ENERGY STAR qualified	\$20	\$0
Heat Pump Water Heater	Northern Climate Specification tier	\$150	\$100
<b>Lighting</b>			
CFLs-General Purpose (Spiral)	ENERGY STAR qualified	\$0	Maximum not-to-exceed price of \$2.50 at selected retailers; Maximum incentive of \$1.50

<sup>2</sup> Please refer to program section of the Company's website for additional details on incentive requirements.

Measure	Qualifications	Customer Incentive	Mid-Market or Contractor Incentive
CFLs-Specialty	ENERGY STAR qualified	\$0	Maximum not-to-exceed price of \$6.00-\$14.00 at selected retailers; Maximum incentive of \$1.75-\$3.50
LED Bulbs	ENERGY STAR qualified	\$0	Maximum incentive of \$14.00 for bulbs only
Fixtures	ENERGY STAR qualified, including LED products; torchiere and portable products are not qualified	\$20	\$0
*All bulb incentives are buy downs paid to manufacturers and retailers.			
<b>HVAC</b>			
All HVAC work must be completed by a Participating or Qualified Contractor.			
CAC - 15+SEER/ 12.5+EER and TXV	Equipment must be 15+ SEER and 12.5 EER and have a field-installed TXV.	\$250	\$25
CAC Best Practice Installation	The equipment must be a minimum of 13 SEER and have a field-installed TXV. Qualified contractor is required to perform air flow test and performance check.	\$50	\$75
Heat Pump Tune-up	Qualified Contractor is required to perform air flow test and performance check.	\$100	\$25
Duct Sealing and Insulation	Pre-existing insulation levels must be R-2 or less. Minimum installation of R-8 to ducts in unconditioned space; both services must be performed by a qualified HVAC contractor at the same time with insulation installed after the ducts are sealed.	\$100 for electrically cooled homes; \$325 for electrically heated homes	\$50

Measure	Qualifications	Customer Incentive	Mid-Market or Contractor Incentive
Ductless Heat Pump (Single-head)	New heat pump must be 16 SEER & 9+ HSPF.	\$750	\$50
Heat Pump Upgrade	For upgrade of existing heat pump to new high efficiency heat pump. New heat pump must be 9.5+ HSPF and 16+ SEER with a TXV	\$500	\$50
Heat Pump Conversion	For replacement of existing electric resistance or electric furnace with new high efficiency heat pump. New heat pump must be 9.5+ HSPF and 16+ SEER and have a TXV	\$600	\$50
Heat Pump Best Practice Installation	The equipment must meet Washington heat pump code minimum and utilize a qualified contractor to perform air flow test and performance check.	\$75	\$75
<b>Weatherization</b>			
For Insulation – Floor, homes must be heated with electric heating serving at least 80% of conditioned floor area in order to qualify.			
For Windows and Insulation – Attic and Wall, homes must have electric heating and/or ducted unitary air conditioning serving at least 80% of conditioned floor area in order to qualify.			
Insulation - Attic	Pre-existing condition must be R-20 or less. Final insulation level must be at least R-49. Electrically cooled homes must have central air conditioning serving 80 percent of the conditioned floor area.	\$0.15/sf. for electrically cooled home; \$0.30/sf. for electrically heated home	\$0/sf.
Insulation - Floor	Pre-existing condition must be R-18 or less. Final insulation level must be at least R-30. Electrically heated home only.	\$0.45/sf. for electrically heated home	\$0/sf.
Insulation - Wall	Pre-existing condition must be R-10 or less. Install increment of R-11 or fill cavity.	\$0.35/sf. For electrically heated and electrically cooled homes	\$0/sf.

Measure	Qualifications	Customer Incentive	Mid-Market or Contractor Incentive
Windows	Tier 1: U-factor of 0.30 or lower. Electrically heated home only; Tier 2: U-factor of 0.20 or lower with a SHGC of 0.35.	Tier 1: \$0.75/sf.; Tier 2: \$1.00/sf. for electrically cooled home, \$2.50/sf. for electrically heated home	\$0/sf.
<b>New Homes</b>			
For New Homes Insulation – Attic, homes must be heated with electric heating at least 80% of conditioned floor area in order to qualify.			
For New Homes Windows, homes must have electric heating and/or ducted unitary air conditioning serving at least 80% of conditioned floor area in order to qualify.			
New Homes ENERGY STAR Builder Option Package (BOP)	All requirements of the heat pump path must be met to qualify for the Northwest ENERGY STAR Homes Washington Program certification. Verification is required and will be performed by a Northwest ENERGY STAR Homes Building Performance Specialist (BPS)	\$1,000	\$0
New Homes Dishwashers	CEE Tier 1 for standard models, Compact models are not qualified	\$20	\$0
New Homes Refrigerators	CEE Tier 2 and above	\$35	\$0
New Homes Heat Pump Water Heater	Northern Climate Specification qualified	\$250	\$0
New Homes Central Air Conditioner	Equipment must be 18+ SEER and have a TXV. Must be installed by a participating or qualified program HVAC contractor	\$275	\$0
New Homes Heat Pump	New heat pump must be 9.5+ HSPF and 16+ SEER with a TXV. Must be installed by a participating or qualified program HVAC contractor.	\$325	\$0
New Homes Insulation - Attic	Install R-60 or greater. Electrically heated home only	\$0.05/sf. for electrically heated home	\$0

Measure	Qualifications	Customer Incentive	Mid-Market or Contractor Incentive
New Homes Windows	Install windows with a U-Factor of 0.20 or lower with a SHGC of 0.35 or lower	\$0.75/sf. for electrically cooled home; \$1.00/sf. for electrically heated home	\$0
New Homes Ductless Heat Pump (Multi-head)	New heat pump must be 9.5+ HSPF. Multi-head heat pump must employ an inverter driven outdoor compressor unit and a variable speed fan or indoor blower. Must be installed by a participating or qualified program HVAC contractor	\$800	\$0

**PACIFIC POWER & LIGHT COMPANY**

WN U-75

Original Sheet No. 118.1

**Schedule 118  
HOME ENERGY SAVINGS INCENTIVE PROGRAM**

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PURPOSE:

Service under this tariff is intended to maximize the efficient utilization of the electricity requirements of new and existing loads in new and existing residences including manufactured housing and multi-family dwellings.

APPLICABLE:

To new and existing residential customers in all territory served by the Company in the state of Washington billed on Schedules 16, 17 and 18. Landlords who own rental properties served by the company in the state of Washington where the tenant is billed on Schedules 16, 17 and 18 also qualify for this program.

CUSTOMER PARTICIPATION:

Customer participation is voluntary and is initiated by following the participation procedures listed on the program web site.

DESCRIPTION:

On-going program to deliver incentives for a variety of equipment and services intended for and located in residential dwellings. Home Energy Savings Incentive Program will be delivered by the Program Administrator and periodic changes will be made to insure or enhance program cost effectiveness as defined by the Company.

QUALIFYING EQUIPMENT OR SERVICES:

Equipment or services for residential dwellings, which when correctly installed or performed, result in verifiable electric energy usage reductions where such usage is compared to the existing equipment or baseline equipment as determined by the Company.

PROGRAM ADMINISTRATOR:

Qualified person or entity hired by the Company to administer this program.

PROVISIONS OF SERVICE:

1. Qualifying Equipment or Services, incentive amounts, and participation procedures will be listed on the program Web site.
2. Incentive delivery may vary by technology and may include any or all of the following; post purchase mail-in, point-of-purchase buy-down, manufacturer buy-down or pre- purchase offer and approval.
3. Incentives may be offered for year-round or for selected time periods.
4. Incentive offer availability, incentive levels and Qualifying Equipment or Services may be changed by the Program Administrator after consultation with the Company to reflect changing codes and standards, sales volumes, quality assurance data or to enhance program cost effectiveness.

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By: Andrea Kelly Andrea L. Kelly

**Title:** Vice President, Regulation

**PACIFIC POWER & LIGHT COMPANY**

WN U-75

Original Sheet No. 118.2

**Schedule 118  
HOME ENERGY SAVINGS INCENTIVE PROGRAM**

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PROVISIONS OF SERVICE: (continued)

5. All changes will occur with a minimum of 45 days notice, be prominently displayed as a change, include a minimum 45 day grace period for processing prior offers (except for manufacturer buy-down incentive delivery) and be communicated at least once to retailers who have participated within the last year.
6. Except for manufacturer buy-downs, incentives paid directly to participants will be in the form of a check issued within 45 days of Program Administrator's receipt of a complete and approved incentive application.
7. Equipment and services receiving an incentive under this program are not eligible for incentives under other Company programs.
8. Company and/or Program Administrator will employ a variety of quality assurance techniques during the delivery of the program. They may differ by equipment or service type and may include, but are not limited to, pre and post installation inspections, phone surveys, retailer invoice reconciliations and confirmation of customer and equipment eligibility.
9. Company may verify or evaluate the energy savings of installed equipment or services. Verification or evaluation may include, but are not limited to, telephone survey, site visit, billing analysis, pre- and post-installation of monitoring equipment as necessary to quantify actual energy savings.

ELECTRIC SERVICE REGULATIONS:

Service under this schedule will be in accordance with the terms of the electric service Agreement between the Customer and the Company. The Electric Service Regulations of the Company on file with and approved by the Washington Utilities and Transportation Commission, including future applicable amendments, will be considered as forming a part of and incorporated in said Agreement.

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## **Home Energy Reports**

### **Years of Implementation**

First introduced to the demand side advisory group in March 2012, the program was implemented in August 2012 and is scheduled for an initial run through December 2015 (41 months).

### **Pilot Description**

The Home Energy Report program is designed to better inform residential customers about their energy usage by providing comparative energy usage data for similar homes located in the same geographical area. In addition, the report provides the customer with information on how to modify their energy usage. Equipped with this information, customers can modify behavior and/or make structural, equipment, lighting or appliance changes to reduce their overall electric energy consumption.

### **Evaluation Update**

#### ***Future Evaluation Report(s):***

<b>Program Years</b>	<b>Evaluation Report Date</b>	<b>To be Completed by</b>
2012-2013	June-2014	Navigant
2014-2015	December-2015	Navigant

### **Pilot Details**

Reports will initially be provided to approximately 13,500 customers; however this number will decrease over the 41 month pilot period due to customer attrition related to customers requesting to be removed from the program and general customer churn (customer move-outs).

The customer population is made up of customers with an annual average electrical energy usage of 20,000 kilowatt hours. To achieve this, the upper bound annual average is approximately 29,000 kilowatt hours and the lower bound annual average is 13,500 kilowatt hours. As degradation occurs over the pilot period, the average usage of the population may also change. The change in average usage will be measured and verified in the pilot evaluation.

Reports will be mailed monthly for the initial three months to build up program awareness and then moved to a bi-monthly schedule through the remainder of the pilot. Each participating customer would receive 21 reports over the term of the pilot. Customers may also opt-out of the mailed paper copy of the report and request an electronic version delivered via email. Participating customers will also have access to a web portal containing the same information about their usage and past usage. The web portal will have other functions such as a home energy audit tool and suggestions to improve energy conservation and efficiency of their home.

Savings will be tracked and reported annually based on reporting from the vendor. Savings reported against the I-937 target will be based on ex-post evaluation of the program performance.

## **Low Income Residential Program Details**

The Company offers a Low Income Weatherization program (Schedule 114) to its income qualifying residential customers.

### **Low Income Weatherization (Schedule 114)**

#### **Years of Implementation**

The Low Income Weatherization program has been in effect since the mid-1980's and has successfully assisted in the weatherization of over 6,900 homes in the Company's Washington state territory.

#### **Program Description**

PacifiCorp partners with three local non-profit agencies, Blue Mountain Action Council in Walla Walla, Northwest Community Action Center in Toppenish and Opportunities Industrialization Center of Washington in Yakima, to provide weatherization services to income qualifying households throughout its Washington service area. The leveraging of PacifiCorp funding along with Washington MatchMaker Program funds allows the agencies to provide these energy efficiency services at no cost to participating customers. The Company provides rebates to partnering agencies for 50-percent of the cost of services while MatchMaker funds are available, and covers 100-percent of costs when these state funds are depleted. Participants qualify whether they are homeowners or renters residing in single-family homes, manufactured homes or apartments.

#### **Planned Program Changes**

The Company has no planned program changes at this time, however, is currently reviewing recommendations made by The Cadmus Group during their recent evaluation of the program (September, 2012).

#### **Evaluation Update**

The most recent program changes proposed in Advice 08-07 were approved effective March 1, 2009. In Advice 08-07, the Company requested that the program changes be in place for at least three and one half years before any additional changes are considered. See "Planned Program Changes" section of this report.

#### ***Last Evaluation Report:***

<b>Program Years</b>	<b>Evaluation Report Date</b>	<b>Completed by</b>
March 1, 2009 – February 28, 2011	September 7, 2012	The Cadmus Group

#### ***Future Evaluation Report(s):***

<b>Program Years</b>	<b>Evaluation Report Date</b>	<b>To be Completed by</b>
2011-2013	By Year-end 2015	To be determined

#### **Program Details**

Details for this program are contained in the program tariff, Schedule 114. Any changes to the details included in the program tariff must be filed and approved by the Commission prior to becoming effective.

# PACIFIC POWER & LIGHT COMPANY

WN U-75

Original Sheet No. 114.1

## **Schedule 114 RESIDENTIAL ENERGY EFFICIENCY RIDER – OPTIONAL FOR QUALIFYING LOW INCOME CUSTOMERS**

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### PURPOSE:

Service under this schedule is intended to maximize the efficient utilization of the electricity requirement of existing residential dwellings inhabited by customers that meet income guidelines through the installation of permanent energy efficient materials.

### APPLICABLE:

To residential Customers residing in single family, multi-family and manufactured home dwellings billed under Schedule 16 or Schedule 17 in all territory served by the Company in the State of Washington. This schedule is applicable to existing dwellings built before July 1, 1991 with permanently installed operable electric space heating designed to heat the living space of the dwelling, except as noted under the energy efficient measures section of this tariff.

### DESCRIPTION:

Service under this program is available to improve the energy efficiency of applicable residential dwellings connected to Company's system. The decision to extend service under this schedule shall be based on eligibility requirements contained herein.

### DEFINITIONS:

- (1) "Dwelling" means real or personal property within the state inhabited as the principal residence of a dwelling owner or a tenant. "Dwelling" includes a manufactured home, a single-family home, duplex or multi-unit residential housing. "Dwelling" does not include a recreational vehicle.
  - (a) Duplexes and fourplexes are eligible if at least one half of the dwelling is occupied by low income tenants.
  - (b) Triplexes and multi-family dwellings are eligible if at least 66% of the units are occupied by low income tenants.
- (2) "Agency" means a non-profit group, Municipality or County authorized to receive funds for installation of weatherization materials in low income properties.
- (3) "Energy Audit" means a service provided by the Agency that includes the measurement and analysis of the energy efficiency of a dwelling including energy savings potential that would result from installing energy efficient measures that are determined to be cost effective.
- (4) "Low Income" means households qualifying under the federal low income guidelines and certified for eligibility according to agency procedure.
- (5) "Major Measures" means ceiling insulation, wall insulation and floor insulation applicable in dwellings with permanently installed electric space heating systems. If physical barriers exist that prohibit the installation of a measure, then the measure is not required as a condition for financial assistance under this schedule.

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Original Sheet No. 114.2

**Schedule 114**

**RESIDENTIAL ENERGY EFFICIENCY RIDER – OPTIONAL FOR QUALIFYING  
LOW INCOME CUSTOMERS**

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DEFINITIONS: (Continued)

- (6) "Supplemental Measures" are not required measures under this schedule, but may qualify for a Company reimbursement based on audit results.
- (7) The "Energy Matchmaker Program" in the State of Washington is designed to increase resources for low-income weatherization by leveraging local matching dollars. A community based agency can access the Energy Matchmaker funds by providing a dollar-for-dollar match. Anticipated match providers include utilities, local governments, service organizations and rental housing owners. All measures installed under the Pacific Power Program must also be eligible under the Energy Matchmaker Program.

FINANCIAL ASSISTANCE:

- (1) The Company will reimburse the "Agency" 50% of the installed cost of all eligible Energy Efficient Measures listed in this tariff. If Matchmaker Program participating Agencies exhaust Matchmaker Funds, Company will fund "Agency" 100% of costs associated with the installation of eligible Energy Efficient Measures. Measures will be determined to be cost effective (Savings to Investment Ratio of 1.0 or greater) through the results of an U.S. Department of Energy (DOE) approved audit. Financial assistance will be provided one time only on any individual major or supplemental measure, and up to two times per dwelling.
- (2) The Company will reimburse the "Agency" for administrative costs when all major measures determined to be cost effective have been installed. The administrative reimbursement will be calculated as: 15% of the Pacific Power rebate.
- (3) The Company will reimburse the "Agency" 50% of the installed cost of repairs necessary to make the installation of the energy efficient measures included in this effective tariff. When matching funds are exhausted funding will be at 100%. The total reimbursement on repairs available to the "Agency" is limited to 15% of the annual reimbursement on energy efficient measures received.
- (4) Agencies must notify Company when matching funds are depleted, no less than 30 days prior to billing at 100% funding levels.
- (5) Total funding for all program components will not exceed \$1,000,000 annually.
- (6) Agencies must invoice the Company within forty-five days of job completion.

(continued)

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**Schedule 114  
RESIDENTIAL ENERGY EFFICIENCY RIDER – OPTIONAL FOR QUALIFYING  
LOW INCOME CUSTOMERS**

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ENERGY EFFICIENT MEASURES:

Financial assistance will be provided based on the results of a cost-effective analysis (Savings to Investment Ratio of 1.0 or greater) through a DOE approved energy audit. The energy efficient measures eligible for funding must be installed in dwellings with permanently installed operable electric space heat except where noted. The installation of measures listed as "Always considered cost effective" under Major and Supplemental Measures are not dependent on audit results. The energy efficient measures that may be eligible for funding are listed as follows along with their estimated measure life where applicable:

Major Measures:

- (1) Ceiling insulation up to R-49 for ceilings with less than R-30 in place. R-30 or better attics will not be further insulated: 30 years.
- (2) Floor insulation over unheated spaces up to R-30: 30 years.
- (3) Wall insulation or exterior insulation sheathing up to R-26 for walls with no insulation installed (financing will not be available for the installation of urea-formaldehyde wall insulation): 30 years.

Nothing shall preclude the Company from providing a reimbursement for the installation of a greater R value of insulation for the above items that are determined to be cost effective (Savings to Investment Ratio of 1.0 or greater) through the audit process.

Supplemental Measures:

- (1) Attic ventilation, excluding power ventilators when installed with ceiling insulation (required if needed at the time ceiling insulation is installed). Whole house mechanical ventilation, and spot ventilation for kitchen and baths at time ceiling insulation is installed: Always considered cost effective.
- (2) Ground cover and water pipe wrap when installed with floor insulation; other vapor barrier materials as required when installed with floor or ceiling insulation: Always considered cost effective.
- (3) Forced air electric space heating duct insulation and sealing in unheated spaces: 30 years.
- (4) Weather stripping and/or caulking, including blower door assisted air sealing and duct sealing: Always considered cost effective.
- (5) Thermal doors: 30 years.

(continued)

**Schedule 114  
RESIDENTIAL ENERGY EFFICIENCY RIDER – OPTIONAL FOR QUALIFYING  
LOW INCOME CUSTOMERS**

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ENERGY EFFICIENT MEASURES: (continued)

Supplemental Measures:

- (6) Dehumidifiers: Always considered cost effective.
- (7) Timed thermostats on centrally controlled multi-room heating systems except when used with heat pumps. Heat anticipating type thermostats for zonal electric resistance heating systems. Zonal thermostats must be separate from the heating unit and must be calibrated at the site to within 2°F of actual room temperature in the range of 65°F-75°F: Always considered cost effective.
- (8) Energy efficient showerheads and aerators where electric water heaters are present. Showerheads with a visible flow rating greater than 2.5 gallons per minute (gpm) will be replaced, and showerheads without a gpm marking may be replaced at the discretion of agency staff: Always considered cost effective.
- (9) Water heaters: Tank replacement of existing electric water heaters when audit indicates a Savings to Investment Ratio of 1.0 or greater. Replacement will be an Energy Star certified model with an EF rating of at least 1.0: 13 years.
- (10) Fluorescent light fixtures applicable in all homes: 15 years.
- (11) Compact fluorescent light bulbs applicable in all homes - limit 10 Energy Star certified bulbs per home placed in fixtures that are on 2 or more hours per day: Always considered cost effective, 7 years.
- (12) Refrigerators applicable in all homes: Refrigerators with monitored results showing annual usage of 1,500 kWh or greater may be replaced with an Energy Star model with an estimated annual consumption of 600 kWh or less. Replaced refrigerators must be removed and recycled in accordance with EPA guidelines: Always considered cost effective, 15 years.
- (13) Class 40 Replacement windows: 25 years.

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**Schedule 114  
RESIDENTIAL ENERGY EFFICIENCY RIDER – OPTIONAL FOR QUALIFYING  
LOW INCOME CUSTOMERS**

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- (1) A Department of Energy approved Energy Audit must be completed by the Agency prior to installation of the measures by the Agency.
- (2) Agency must qualify residential customers for assistance using the Federal Low Income Guidelines.
- (3) Installation shall meet Federal, State and Local building codes.
- (4) Measures installed under this schedule shall not receive financial incentives from other Company programs.
- (5) Agency shall inspect the installation to insure that the weatherization meets or exceeds required specifications.
- (6) Company may audit Agency weatherization and financial records and inspect the installations in dwellings of customers receiving weatherization under this program. Records will include audit results.
- (7) Company shall pay the Agency the amount established under the terms of their contract when provisions of this schedule have been met.

**RULES AND REGULATIONS:**

Service under this schedule is subject to the General Rules and Regulations contained in the tariff of which this schedule is a part, and to those prescribed by regulatory authorities.

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## **Non-Residential Program Details**

The Company offers FinAnswer Express (Schedule 115) and Energy FinAnswer (Schedule 125) as non-residential programs in the state of Washington. The two programs work together to provide a comprehensive set of financial and service incentives to assist the Company's non-residential customers in improving the energy efficiency at their facilities.

### **FinAnswer Express (Schedule 115)**

#### **Years of Implementation**

This program began as Small Retrofit Incentive and Retrofit Incentive (Schedules 115 and 116) in November 2000. In May 2004 the program was improved and renamed FinAnswer Express (Schedule 115).

#### **Program Description**

The FinAnswer Express program provides prescriptive incentives to commercial, industrial and agricultural customers for typical lighting, HVAC, motor, building envelope, food service, appliances, irrigation, dairy/farm equipment, compressed air and other retrofits or new installations. The program includes an expedited energy analysis and incentives based on the equipment installed (\$/lamp, \$/horsepower, \$/ton, etc.). It includes a provision for custom incentives for energy efficiency measures that are not listed in the program incentive tables. The program is marketed primarily via trade allies, PacifiCorp staff, and a combination of other Company outreach efforts including radio advertising.

#### **Evaluation Update**

In 2012, the Company initiated process and impact evaluations for the FinAnswer Express program in Washington for program years 2009-2011 available year-end 2012.

#### ***Last Evaluation Report:***

<b>Program Years</b>	<b>Evaluation Report Date</b>	<b>Completed by</b>
2005-2008	December 6, 2010	The Cadmus Group

#### ***Future Evaluation Report(s):***

<b>Program Years</b>	<b>Evaluation Report Date</b>	<b>To be Completed by</b>
2009-2011	By Year-end 2012	Navigant Consulting Inc.
2012-2013	By Year-end 2014	Navigant Consulting Inc.

#### **Program Details**

Program details for this program are maintained part in the program tariff and part on the Company's website. Any changes to the details included in the program tariff must be filed and approved by the Commission prior to becoming effective. Changes to supporting incentive and measure specific information outside of the tariff require Advisory Group involvement and a customer/market 45 day noticing period. The text below from the Advice Letter 06-008 (Docket UE-061710), filed on November 8, 2006, describes the information that is managed outside of the tariff and the process for changes. All program information, tariff and website information is provided later in this section.



*Future changes in the... incentive tables and definitions would be driven by program and market data. The Company assesses program performance on an ongoing basis and would propose changes at least annually. Changes may be proposed more frequently if there is compelling market data. Similar to the filing process, the Company would present information on proposed changes to its Advisory Group and seek comments prior to making changes. Changes would be clearly posted on the program web site and e-mailed to the appropriate Commission staff person with at least 45 days advance notice.*

The incentive tables, program definitions and custom incentives offered are managed outside of the program tariff on the Company website via the process described above.

**Program Changes**

Another set of program changes for FinAnswer Express are currently in the planning phase but are not included in this update. The last set of changes, effective in September 2013, is intended to align with code and standard changes and market data. Current information for the program incorporating the most recent changes can be found on the Company’s website at the following links and included in summary below.

<b>Program Details</b>	<b>Website link</b>
Incentive tables (retrofit) are included in the program brochure	<a href="http://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/WA_FinAnswer_Express_Retrofits_Brochure_and_Incentive_Tables.pdf">http://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/WA_FinAnswer_Express_Retrofits_Brochure_and_Incentive_Tables.pdf</a>
Incentive tables (new construction/major renovation) are included in the program brochure	<a href="http://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/WA_FinAnswer_Express_NCMR_Brochure_and_Incentive_Tables.pdf">http://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/WA_FinAnswer_Express_NCMR_Brochure_and_Incentive_Tables.pdf</a>
Program definitions	<a href="http://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/FinAnswer_Express_29.pdf">http://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/FinAnswer_Express_29.pdf</a>
Custom incentive offering	<a href="http://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/WA_FinAnswer_Express_Custom_Incentives.pdf">http://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/WA_FinAnswer_Express_Custom_Incentives.pdf</a>

## Washington FinAnswer Express

### Definitions

**Commercial Building:** A structure that is served by Pacific Power and meets the applicability requirements of Washington Schedule 115, the program tariff, on file with the Washington Utilities & Transportation Commission at the time an Energy Efficiency Incentive Agreement is executed or an Energy Efficiency Incentive Application is submitted and which does not meet the definition of an Industrial Facility.

**Customer:** Any party who has applied for, been accepted and receives service at the real property, or is the electricity user at the real property.

**Energy Efficiency Incentive:** Payments of money made by Pacific Power to Owner or Customer for installation of an Energy Efficiency Measure pursuant to an executed Energy Efficiency Incentive Agreement or approved Energy Efficiency Incentive Application.

**Energy Efficiency Incentive Agreement:** An agreement between Owner or Customer and Pacific Power providing for Pacific Power to furnish Energy Efficiency Incentives for an Energy Efficiency Project.

**Energy Efficiency Incentive Application:** An application submitted by Owner or Customer to Pacific Power for Energy Efficiency Incentives.

**Energy Efficiency Measure (EEM):** A permanently installed measure which can improve the efficiency of the Customer's electric energy use.

#### **Energy Efficiency Measure (EEM) Cost:**

- New Construction/Major Renovation: EEM Cost is the total installed cost of energy efficiency equipment or system minus the cost of the code compliance/common practice equipment or system.
- Retrofit: EEM Cost is the total installed cost of the energy efficiency equipment or modification. In the case of New Construction, Major Renovations, and Retrofits, EEM Costs shall mean the Owner or Customer's reasonable costs incurred (net of any discounts, rebates or incentives other than Energy Efficiency Incentives from Pacific Power, or other consideration that reduces the final actual EEM Cost incurred by the Owner or Customer) to purchase and install EEMs at the Owner's or Customer's facility. If the Owner or Customer installs the EEM then the cost of installation shall be equal to the Owner's or Customer's actual labor costs for such installation.

**Energy Efficiency Project:** One or more EEM(s) with similar one year payback limitations (see below) covered by one Energy Efficiency Incentive Agreement.

**Energy Efficiency Project Cost:** The sum of EEM Costs for one or more EEM(s) with similar one year payback limitations (see below) covered by one Energy Efficiency Incentive Agreement.

**Industrial Facility:** Buildings and process equipment associated with manufacturing.

**Major Renovation:** A change in facility use type or where the existing system will not meet Owner/Customer projected requirements within existing facility square footage.

**Mixed Use:** Buildings served by a residential schedule and a rate schedule listed under Washington Schedule 115 shall be eligible for services under this schedule provided the Energy Efficiency Project meets the definition of New Construction or Major Renovation.

**New Construction:** A newly constructed facility or newly constructed square footage added to an existing facility.

**Owner:** The person who has both legal and beneficial title to the real property, and is the mortgager under a duly recorded mortgage of real property, the trustor under a duly recorded deed of trust.

**Retrofit:** Changes, modifications or additions to systems or equipment in existing facility square footage.

#### Incentives – General Information

##### **Prescriptive incentives**

Per unit incentives are listed in the program incentive tables for specific Energy Efficiency Measures (EEMs) and are subject to the incentive caps below. Incentives are subject to change and current incentives can be found at [www.pacificpower.net](http://www.pacificpower.net).

##### **Custom incentives**

Energy Efficiency Measures not listed in the incentive tables may be eligible for a Custom Energy Efficiency Incentive. Pacific Power will complete an analysis of the EEM Cost and electric energy savings and determine whether to offer a custom Energy Efficiency Incentive and the incentive amount. The custom Energy Efficiency Incentive is Pacific Power's estimate of annual electric savings multiplied by \$0.10/kWh and subject to the incentive caps described below.

Electric savings resulting from lighting interaction with mechanical equipment is not eligible for a custom Energy Efficiency Incentive.

The baseline wattage for all retrofit linear fluorescent lighting EEMs is the lesser of:

- a) Wattage of existing equipment, or
- b) Wattage of deemed baseline ballast and lamp combination listed in the lighting wattage table available on the Washington energy efficiency program section of the Pacific Power website.

Pacific Power may adjust baseline electric energy consumption and costs to reflect any of the following: energy codes, standard practice, changes in capacity, changes in production or facility use and equipment at the end of its useful life. Such adjustments may be made for lighting energy efficiency measures installed in new construction projects where energy code does not apply.

### Incentive Caps

	Percent of Energy Efficiency Project Cost Cap	1 Year Simple Payback Cap for Energy Efficiency Projects
Measures Listed in Incentive Tables		
Lighting - Retrofit	70%	Yes
Lighting - New Construction/Major Renovation	None	No
Motors	None	No
HVAC	None	No
Building Envelope	None	No
Food Service	None	No
Appliances	None	No
Irrigation (see note)	None	No
Dairy/Farm Equipment	None	No
Compressed Air (see note)	None	No
Other Energy Efficiency Measures (see note)	None	No
Measures Not Listed in Incentive Tables		
Lighting - New Construction/Major Renovation Measures Receiving a Custom Incentive	None	No
Other Measures Receiving a Custom Incentive	70%	Yes

**Notes for Incentive Caps Table:**

1. The 1 year simple payback cap means Energy Efficiency Incentives will not be available to reduce the simple payback of an Energy Efficiency Project below one year. If required, individual EEM Energy Efficiency Incentives will be adjusted downward pro-rata so the Energy Efficiency Project has a simple payback after incentives of one year or more.
2. EEM Costs are subject to Pacific Power review and approval and Pacific Power may require additional documentation from the Customer or Owner.
3. Two irrigation Energy Efficiency Measures have a measure cost cap. See the Irrigation Equipment incentive table for details.
4. A compressed air measure has a measure cost cap. See the compressed air incentive table for details.
5. The Network PC Power Management Software measure has a measure cost cap. See the Other Energy Efficiency Measures incentive table for details.

**Retrofit Lighting Incentive Table**

Measure	Category	Eligibility Requirements	Incentive
T8 Fluorescent	Standard	4' Lamp $\leq$ 32 Watts, Electronic ballast with Ballast Factor $\leq$ 0.88 (See Note 3)	\$3/Lamp
	Premium	4' CEE Qualified Reduced Wattage or High Performance Lamp and CEE Qualified Ballast included on qualified ballast list	\$7/Lamp
	Delamp	4' CEE Qualified Reduced Wattage or High Performance Lamp and CEE Qualified Ballast. Must remove one or more lamps and corresponding sockets within the same fixture.	\$21/Lamp Removed
	Relamp	Lamp wattage reduction $\geq$ 3 Watts, No ballast retrofit	\$0.25/Lamp
	High Bay	4' CEE Qualified High Performance Lamp. Must replace T12HO, Incandescent, or HID in a high ceiling application	\$20/Lamp
T5 Fluorescent	Standard	4' Nominal Lamp $\leq$ 28 Watts, Ballast Factor $\leq$ 1.0,	\$5/Lamp
	Relamp	Lamp wattage reduction $\geq$ 3 Watts, No ballast retrofit	\$0.25/Lamp
	High Bay	4' Nominal High Output Lamp	\$20/Lamp
Cold Cathode	Screw-in Lamp	All wattages	\$5/Lamp
Compact Fluorescent Lamp (CFL)	Hardwired Fixture	All wattages	\$5/Fixture
Ceramic Metal Halide (CMH)	CMH Fixture	All wattage	\$35/Fixture
Pulse Start Metal Halide (PSMH)	PSMH Fixture	Wattages $>$ 500W	\$60/Fixture
	Electronic Ballast	Must be used in place of or replace a magnetic ballast	\$20/Ballast
Induction	Induction Fixture	All wattages, New fixtures only	\$125/Fixture
LED	Integral Screw-in Lamp	LED must be listed on qualified equipment list	\$10/Lamp
	Recessed Downlight	LED must be listed on qualified equipment list	\$10/Fixture
	Outdoor Area and Roadway	LED must be listed on qualified equipment list	\$100/Fixture

	Parking Garage	LED must be listed on qualified equipment list	\$100/Fixture
	High and Low Bay	LED must be listed on qualified equipment list	\$100/Fixture

**Notes for Retrofit Lighting Incentive Table:**

1. To be eligible for the incentives listed, the new lighting system must use less energy than the existing lighting system replaced or the baseline lighting system as determined by Pacific Power.
2. Incentives are capped at 70 percent of Energy Efficiency Project Costs and subject to the one-year payback cap.
3. The incentive for Standard T8 Fluorescent will no longer be available effective July 14, 2012.
4. Two-foot U-tube lamps may be substituted for four-foot linear fluorescent lamps.
5. Incentives for T8 Premium Delamps may not be combined with other linear fluorescent lamp or fixture incentives. Complete fixture removals are not eligible.
6. Incentives for T8 Relamps may not be combined with other linear fluorescent lamp or fixture incentives and will only be paid once per facility.
7. Qualified equipment lists referenced in the table are posted on the Washington energy efficiency program section of Pacific Power's website.

BF = Ballast Factor

CEE = Consortium for Energy Efficiency

CFL = Compact Fluorescent Lamp

CMH = Ceramic Metal Halide

HID = High Intensity Discharge (e.g. Mercury Vapor, High Pressure Sodium, Metal Halide)

HO = High Output

LED = Light-Emitting Diode

PSMH = Pulse-Start Metal Halide

**Lighting Controls and Non-General Illuminance Lighting**

<b>Measure</b>	<b>Category</b>	<b>Eligibility Requirements</b>	<b>Incentive</b>
Lighting Control	Occupancy Control	PIR, Dual Tech, or Integral Sensor	\$75/Sensor
	Daylighting Control	Must control fixtures with qualifying dimming ballast(s)	\$75/Sensor
	Advanced Daylighting Control	Must incorporate both an occupancy sensor and daylighting sensor operating as part of the same control sequence in the same space	\$150
	Timeclock	Must control on/off schedule of lighting equipment	\$20/timeclock
	Dimming Ballast	Continuous, Stepped, or Bi-level ballast or automated control that dims 50% or more of the fixture. Must be controlled by a qualifying occupancy or daylighting control	\$15/Ballast
Non-General Illuminance	Exit Sign	LED or photoluminescent replacing incandescent or fluorescent	\$15/Sign
	LED Message Center Sign	LED replacing existing incandescent signage	\$5/Lamp
	LED Channel Letter Sign	LED replacing existing neon or fluorescent signage	\$5/Linear Foot
	LED Marquee/Cabinet Sign	LED replacing existing fluorescent signage	\$5/Linear Foot

**Notes for Lighting Controls and Non-General Illuminance Lighting Incentive Table:**

1. To be eligible for the incentives listed, the new lighting system must use less energy than the existing lighting system replaced.
2. Incentives are capped at 70 percent of Energy Efficiency Project Costs and incentives will not be available to reduce the Energy Efficiency Project simple payback below one year.
3. Incentives for Advanced Daylighting Controls may not be combined with other lighting control incentives.

PIR = Passive Infrared

Dual Tech = Sensors combining ultrasonic and passive infrared

LED - Light-emitting Diode



**New Construction/Major Renovation Lighting Incentive Table**

Measure	Category	Eligibility Requirements	Incentive
Interior Lighting	Lighting and Lighting Control	<p>1. The total connected interior lighting power for New Construction/Major Renovation projects must be 10% lower than the interior lighting power allowance calculated under the applicable version of the State energy code. For New Construction/Major Renovation projects not included in the state energy code, the total connected lighting power must be 10% lower than common practice as determined by Pacific Power.</p> <p>2. Energy savings is subject to approval by Pacific Power</p>	\$0.08/kWh annual energy savings
Exterior Lighting	Induction Fixture	All Wattages, New Fixtures Only	\$125/Fixture
	LED Outdoor Area and Roadway	LED must be listed on qualified fixture list	\$100/Fixture
	LED Parking Garage	LED must be listed on qualified fixture list	\$100/Fixture
	Lighting Control	Integral occupancy sensor which must control a linear fluorescent, induction, or LED fixture. Sensor must be installed on a continuous duty light	\$75/sensor

**Motor Incentives Table**

<b>Equipment Type</b>	<b>Size Category</b>	<b>Sub-Category</b>	<b>Minimum Efficiency Requirement</b>	<b>Customer Incentive</b>
Variable-Frequency Drives (HVAC fans and pumps)	≤ 100 horsepower	HVAC fans and pumps	(See Note 2)	\$65/horsepower
Green Motor Rewinds	≥ 15 and ≤ 5,000 hp	--	Must meet GMPG Standards	\$1/horsepower (See Note 3)

**Notes for Motor Incentives Table:**

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Throttling or bypass devices, such as inlet vanes, bypass dampers, three-way valves, or throttling valves must be removed or permanently disabled to qualify for HVAC fan or pump VFD incentives. VFDs required by or used to comply with the applicable version of the energy code are not eligible for incentives. Savings will only be realized for installations where a variable load is present.
3. Green Motor Rewind motors that are installed or placed in inventory may qualify for an incentive. For Green Motor Rewinds, the participating electric motor service center is paid \$2/horsepower for eligible Green Motor Rewinds. A minimum of \$1/horsepower is paid by the service center to the customer as a credit on the motor rewind invoice. The balance is retained by the service center.
4. Incentives are not available for National Electrical Manufacturers Association (NEMA) Premium Efficiency Motors purchased on or after December 19, 2010.
5. The following applies to Electronically Commutated Motors (ECMs) less than or equal to 1 horsepower installed in HVAC or refrigeration applications:
  - a. For New Construction/Major Renovations - ECMs purchased on or after the effective date of the 2009 Washington State Energy Code will not be eligible for an incentive.
  - b. For Retrofits, ECMs purchased on or after the effective date of these program changes will not be eligible for incentives.

ECM = Electronically Commutated Motor  
 GMPG = Green Motors Practices Group  
 HVAC = Heating, Ventilating and Air Conditioning  
 NEMA = National Electrical Manufacturer’s Association  
 VFD = Variable Frequency Drive

**HVAC Equipment Incentive Table**

			Minimum Efficiency Requirement & Customer Incentive		
Equipment Type	Size Category	Sub-Category	\$25/ton	\$50/ton	\$75/ton
Unitary Commercial Air Conditioners, Air-Cooled (Cooling Mode)	< 65, 000 Btu/hr (single phase)	Split system and single package	--	CEE Tier 1	CEE Tier 2
	< 65, 000 Btu/hr (three phase)	Split system and single package	--		
	≥ 65,000 Btu/hr (three phase)	Split system and single package	--		
Unitary Commercial Air Conditioners, Water and Evaporatively Cooled	All equipment sizes	Split system and single package	--	CEE Tier 1	--
Package Terminal Air Conditioners (PTAC) (Heating & Cooling Mode)	≤ 8,000 Btu/hr	Single package	12.2 EER	--	--
	> 8,000 Btu/hr and < 10,500 Btu/hr	Single package	11.9 EER	--	--
	≥ 10,500 Btu/hr and ≤ 13,500 Btu/hr	Single package	10.7 EER	--	--
	> 13,500 Btu/hr	Single package	9.9 EER	--	--
Package Terminal Heat Pumps (PTHP) (Heating & Cooling Mode)	≤ 8,000 Btu/hr	Single package	--	12.2 EER and 3.4 COP	--
	> 8,000 Btu/hr and < 10,500 Btu/hr	Single package	--	11.5 EER and 3.3 COP	--
	≥ 10,500 Btu/hr and ≤ 13,500 Btu/hr	Single package	--	10.7 EER and 3.1 COP	--
	> 13,500 Btu/hr	Single package	--	9.8 EER and 3.0 COP	--
Heat Pumps, Air-Cooled (Cooling Mode)	< 65, 000 Btu/hr (single phase)	Split system and single package	--	CEE Tier 1	CEE Tier 2
	< 65, 000 Btu/hr (three phase)	Split system and single package	--		CEE Tier 2
	≥ 65,000 Btu/hr (three phase)	Split system and single package	--		--
Heat Pumps, Air-Cooled	< 65, 000 Btu/hr (single phase)	Split system and single package	--	CEE Tier 1	CEE Tier 2

(Heating Mode) - See Note 2	< 65,000 Btu/hr (three phase)	Split system and single package	--		CEE Tier 2
	≥ 65,000 Btu/hr (three phase)	47°F db/43°F wb outdoor air	--		--
		17°F db/15°F wb outdoor air	--		--
Heat Pumps, Water-Source (Cooling Mode)	< 135,000 Btu/hr	86°F Entering Water	--	CEE Tier 1	--
Heat Pumps, Water-Source (Heating Mode) - See Note 2	< 135,000 Btu/hr	68°F Entering Water	--	CEE Tier 1	--
Heat Pumps, Ground-Source or Groundwater-Source (Heating & Cooling Mode) - See Note 2	All sizes	77°F Entering Water	--	ENERGY STAR Qualified	--
Ground Source or Groundwater-Source Heat Pump Loop	All sizes	Open Loop	\$25/ton	--	--
		Closed Loop			

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**Notes for HVAC Equipment Incentive Table:**

1. Equipment that meets or exceeds the efficiency requirements listed for the size category in the above table may qualify for the listed incentive. Equipment must meet all listed efficiency requirements to qualify for the listed incentives.
2. Incentives for heat pumps are available per ton of cooling capacity ONLY. No incentives are paid per ton of heating capacity. Heat Pumps must meet both the cooling mode and heating mode efficiency requirements to qualify for per ton cooling efficiency incentives.
3. Equipment size categories are specified in terms of net cooling capacity at AHRI standard conditions as determined by AHRI Standard 210/240 for units <65,000 Btu/hr, AHRI Standard 340/360 for units  $\geq$ 65,000 Btu/hr, and AHRI Standard 310/380 for PTAC and PTHP units.
4. Ground and Water Source Heat Pumps must meet or exceed listed efficiency requirements when rated in accordance with ISO-13256-1 to qualify for the listed incentive.
5. Units rated only with an IPLV may qualify for the listed incentives if the value meets or exceeds the minimum IPLV established as part of the Consortium for Energy Efficiency Commercial Unitary Air Conditioning and Heat Pump specification effective January 16, 2009.
6. Efficiency requirements align with the Consortium for Energy Efficiency (CEE) Unitary Air-Conditioning and Heat Pump Specification for equipment with heating sections other than electric resistance. CEE minimum efficiency requirements are listed on Pacific Power's website.

AHRI = Air-Conditioning, Heating and Refrigeration Institute

CEE = Consortium for Energy Efficiency

COP = Coefficient of Performance

EER = Energy Efficiency Ratio

HSPF = Heating Seasonal Performance Factor

HVAC = Heating, Ventilation and Air-Conditioning

IEER = Integrated Energy Efficiency Ratio

IPLV = Integrated Part Load Value

PTAC = Packaged Terminal Air Conditioner

PTHP = Packaged Terminal Heat Pump

SEER = Seasonal Energy Efficiency Ratio

**Other HVAC Equipment and Controls Incentives**

<b>Equipment Type</b>	<b>Size Category</b>	<b>Sub-Category</b>	<b>Minimum Efficiency Requirement</b>	<b>Customer Incentive</b>
Evaporative Cooling	All sizes	Direct or Indirect	Industry Standard Rating (ISR)	\$0.06/ISR CFM
Indirect-Direct Evaporative Cooling (IDEC)	All sizes	--	Applicable system components must exceed minimum efficiencies required by energy code	(See Note 2)
Chillers	All except chillers intended for backup service only	Serving primarily occupant comfort cooling loads (no more than 20% of process cooling loads)	Must exceed minimum efficiencies required by energy code	(See Note 3)
Room Air Conditioner	Residential (used in a business)		See Home Energy Savings program	(See Note 5)
365/366 day Programmable Thermostat	All sizes in portable classrooms with mechanical cooling	Must be installed in portable classroom unoccupied during summer months	365/366 day thermostatic setback capability	\$150/thermostat
Occupancy Based PTHP/PTAC control (Retrofit only)	All sizes with no prior occupancy based control	--	(See Note 4)	\$50/controller

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**Notes for other HVAC Equipment and Controls Incentive Table:**

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Incentives are paid at \$0.12/kWh annual energy savings + \$50/kW average monthly demand savings. IDEC energy and demand savings subject to approval by Pacific Power.
3. Incentives are paid at \$0.12/kWh annual energy savings + \$50/kW average monthly demand savings. Chiller energy and demand savings subject to approval by Pacific Power.
4. Controller units must include an occupancy sensor and include the capability to set back the zone temperature during extended unoccupied periods and set up the temperature once the zone is occupied.
5. Refer to Pacific Power's Home Energy Savings Program for efficiency requirements and incentives for listed residential appliances used in a business.

CFM = Cubic Feet per Minute

ISR = Industry Standard Rating

IDEC = Indirect Direct Evaporative Cooling

PTHP = Package Terminal Heat Pump

PTAC = Package Terminal Air Conditioner

### Building Envelope (Retrofit) Incentives

Equipment Type	Category	Minimum Efficiency Requirement	Customer Incentive
Cool Roof	--	ENERGY STAR Qualified	\$0.10/square foot
Roof/Attic Insulation	--	Minimum increment of R-10 insulation	\$0.08/square foot
	Site-Built	U-Factor $\leq 0.30$ and SHGC $\leq 0.33$ (Glazing Only Rating)	\$0.34/square foot
Windows (See Note 3, 4)	Assembly	U-Factor $\leq 0.30$ and SHGC $\leq 0.33$ (Entire Window Assembly Rating)	\$0.34/square foot
Window Film	Existing Windows	(See Note 5)	(See Note 5)

**Notes for Retrofit Building Envelope Incentive Table:**

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Building must be conditioned with mechanical cooling to be eligible for envelope incentives.
3. Energy performance of window assemblies and glazing products must be rated in accordance with NFRC. Site-Built metal window systems must include a thermal break within the frame or other appropriate NFRC certification to qualify for incentives. Skylights are not eligible to receive incentives.
4. Window square footage is determined by the dimensions of the entire window assembly, not just the window glass.
5. Incentives for window film are calculated based on film specifications and window orientation at \$0.12/kWh annual energy savings. Energy savings subject to approval by Pacific Power.

NFRC = National Fenestration Rating Council  
 SHGC = Solar Heat Gain Coefficient



**Building Envelope (New Construction/Major Renovation) Incentives**

<b>Equipment Type</b>	<b>Category</b>	<b>Minimum Efficiency Requirement</b>	<b>Customer Incentive</b>
Cool Roof	--	ENERGY STAR Qualified	\$0.10/square foot
Roof/Attic Insulation	--	Minimum increment of R-5 insulation above code (See Note 5)	\$0.04/square foot
Wall Insulation	--	Minimum increment of R-3.7 continuous insulation above code (See Note 5)	\$0.05/square foot
Windows (See Note 3, 4)	Site-Built	U-Factor $\leq$ 0.30 and SHGC $\leq$ 0.33 (Glazing Only Rating)	\$0.34/square foot
	Assembly	U-Factor $\leq$ 0.30 and SHGC $\leq$ 0.33 (Entire Window Assembly Rating)	\$0.34/square foot

**Notes for Building Envelope (New Construction/Major Renovation) Incentives Table:**

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Building must be conditioned with mechanical cooling to be eligible for envelope incentives.
3. Window square footage is determined by the dimensions of the entire window assembly, not just the window glass.
4. Energy performance of window assemblies and glazing products must be rated in accordance with NFRC. Site-Built metal window systems must include a thermal break within the frame or other appropriate NFRC certification to qualify for incentives. Skylights are not eligible to receive incentives.
5. Compliance with the minimum efficiency requirements of Roof/Attic Insulation and Wall Insulation measures may be demonstrated with equivalent U-factors and is subject to Pacific Power approval.

NFRC = National Fenestration Rating Council

SHGC = Solar Heat Gain Coefficient

**Food Service Equipment Incentives**

<b>Equipment Type</b>	<b>Equipment Category</b>	<b>Minimum Efficiency Requirement</b>	<b>Customer Incentive</b>
Residential Dishwasher	Used in a business	See Home Energy Savings program	(See Note 2)
Commercial Dishwasher (Electric Water Heating Only) (See Note 3)	Undercounter	ENERGY STAR Qualified	\$500
	Stationary Rack, Single Tank, Door Type	ENERGY STAR Qualified	\$1,000
	Single Tank Conveyor	ENERGY STAR Qualified	\$1,500
	Multiple Tank Conveyor	ENERGY STAR Qualified	\$2,000
Electric Insulated Holding Cabinet	Full Size – Tier 1	ENERGY STAR Qualified	\$300
	3/4 Size – Tier 1		\$250
	1/2 Size – Tier 1		\$200
	Full Size – Tier 2	Watts/cubic feet ≤ 20 W (See Note 4)	\$600
	3/4 Size – Tier 2		\$500
	1/2 Size – Tier 2		\$400
Electric Steam Cooker	3-, 4-, 5- and 6-pan sizes – Tier 1	ENERGY STAR Qualified	\$750
	3-, 4-, 5- and 6-pan sizes – Tier 2	Heavy Load Efficiency ≥ 65%, Idle Energy Rate ≤ 0.23 kW (See Note 4)	\$840
Electric Convection Oven	--	≥70% cooking efficiency (See Note 4)	\$350
Electric Griddle	Tier 1	ENERGY STAR Tier 1 Qualified	\$250
	Tier 2	ENERGY STAR Tier 2 Qualified	\$350
Electric Combination Oven	--	Heavy Load Efficiency ≥70%, Idle Energy Rate ≤ 3.5 kW (See Note 4)	\$1,000
Electric Commercial Fryer	Tier 1	ENERGY STAR Qualified	\$200
	Tier 2	Cooking Efficiency ≥ 86.6%, Idle Energy Rate ≤ 772 Watts (See Note 4)	\$300
Ice Machines	Tier 1: Harvest	ENERGY STAR	\$125

(Air-Cooled Only)	Rate <500 lbs/day	Qualified	
	Tier 1: Harvest Rate $\geq 500$ lbs/day	ENERGY STAR Qualified	\$150
	Tier 2: Harvest Rate <500 lbs/day	CEE Tier 3 Qualified	\$250
	Tier 2: Harvest Rate $\geq 500$ lbs/day	CEE Tier 3 Qualified	\$400
Residential Refrigerator	Used in a business	See Home Energy Savings program	(See Note 2)
Commercial Glass Door Refrigerator	$0 < V < 15$	ENERGY STAR Qualified	\$100
	$15 \leq V < 30$		\$125
	$30 \leq V < 50$		\$150
	$50 \leq V$		\$175
	Chest Configuration		\$75
Commercial Glass Door Freezer	$0 < V < 15$	ENERGY STAR Qualified	\$300
	$15 \leq V < 30$		\$325
	$30 \leq V < 50$		\$375
	$50 \leq V$		\$800
	Chest Configuration		\$100
Commercial Solid Door Refrigerator	$0 < V < 15$	ENERGY STAR Qualified	\$50
	$15 \leq V < 30$		\$75
	$30 \leq V < 50$		\$100
	$50 \leq V$		\$125
	Chest Configuration		\$75
Commercial Solid Door Freezer	$0 < V < 15$	ENERGY STAR Qualified	\$150
	$15 \leq V < 30$		\$175
	$30 \leq V < 50$		\$200
	$50 \leq V$		\$300
	Chest Configuration		\$150
High-Efficiency Refrigerated Beverage Vending Machine (See Note 5)	Class A	$MDEC = 0.055 \times V + 2.56$	\$150
	Class B	$MDEC = 0.073 \times V + 3.16$	
LED Case Lighting (Retrofit Only)		LED replacing fluorescent lamp in refrigerated cases.	\$10/linear foot
Refrigerated Case Occupancy Sensor (Retrofit Only)		Installed in existing refrigerated case with LED lighting	\$1/linear foot

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**Notes for Food Service Equipment Incentives Table:**

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Refer to Pacific Power's Home Energy Savings Program for efficiency requirements and incentives for listed residential appliances used in a business.
3. Commercial Dishwashers must be supplied with electrically heated domestic hot water. Models with either electric or gas booster heaters are eligible for incentives.
4. To meet the Minimum Efficiency Requirement(s) listed, values must be based on testing in accordance with the applicable ASTM Standard Test Method.
5. Qualifying Beverage Vending Machines must be purchased prior to August 31, 2012. Beverage Vending Machines purchased after August 31, 2012 will not be eligible for incentives.

CEE = Consortium for Energy Efficiency

ASTM = American Society for Testing and Materials

MDEC = Maximum Daily Energy Consumption

V = Association of Home Appliance Manufacturers (AHAM) Volume in cubic feet

**Appliances Incentive Table**

<b>Equipment Type</b>	<b>Equipment Category</b>	<b>Minimum Efficiency Requirement</b>	<b>Customer Incentive</b>
High-Efficiency Clothes Washer	Residential (used in a business)	See Home Energy Savings program	
	Commercial (must have electric water heating)	ENERGY STAR® Qualified	\$150
		CEE Tier 3 Qualified	\$200
Electric Water Heater	Residential (used in a business)	See Home Energy Savings program	

**Notes for Appliances Incentive Table**

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Equipment must meet the efficiency rating standard that is in effect on the date of purchase.
3. Refer to Pacific Power’s Home Energy Savings program for efficiency requirements and incentives for listed residential appliances used in a business.

CEE = Consortium for Energy Efficiency

**Irrigation Incentive Table (Retrofit Only)**

<b>Irrigation Measure</b>	<b>Replace</b>	<b>With</b>	<b>Limitations</b>	<b>Customer Incentive</b>
Sprinkler Pressure Regulators	Worn or faulty regulator	New pressure regulator	Must be same design pressure or less	\$2.75 each
Rotating, Spray-Type or Low-Pressure Sprinklers	Worn rotating, spray-type, low-pressure, or impact sprinklers	New rotating, spray-type, or low-pressure sprinklers	Must be same design flow or less	\$3.00 each (up to 70% of cost)
New or Rebuilt Impact Sprinklers	Worn or leaking impact sprinkler	New or rebuilt impact sprinkler	--	\$3.00 each (up to 70% of cost)
Sprinkler Nozzles	Existing worn nozzles	New brass or plastic nozzles	Must be same design flow or less	\$0.25 each
Flow Controlling Type Nozzles	Existing worn flow-controlling type nozzles	New flow-controlling type nozzles	Must be same design flow or less	\$1.50 each
Drains and Gaskets for Wheel Lines, Hand Lines, Pivots, Linears or Portable Main Lines	Worn and leaking drains and gaskets	New drains and gaskets (Also includes seals and riser caps (dome discs) for valve openers)	--	\$1.00 each
Gooseneck Elbow with Drop Tube or Boomback	Worn or leaking gooseneck elbow with drop tube or boomback	New gooseneck elbow with drop tube or boomback	--	\$1.00/outlet
Repair Leaking Wheel Lines, Hand Lines or Portable Main Lines	Worn and leaking pipe connections or sections	Cut and pipe press or weld repair of leaking pipe connections or sections	Invoice must show number of joints or leaks repaired	\$8.00/joint
New or Rebuilt Wheel-line Levelers	Worn or faulty wheel-line leveler	New or rebuilt wheel-line leveler	--	\$0.75 each
Center Pivot Base Boot Gasket	Worn and leaking center pivot base boot gasket	New center pivot base boot gasket	--	\$80.00 each
Wheel-line Feed Hose	Worn or leaking wheel-line feed hose	New or rebuilt wheel-line feed hose	--	\$15.00 each
Wheel-line Hubs (for Thunderbird type wheel lines)	Worn or leaking hub	New wheel-line hub	--	\$12.00 each

Irrigation Pump VFD	--	Add VFD to existing irrigation pump motor	--	(See Note 4)
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**Notes for Irrigation Incentive Table:**

1. Irrigation measures that meet the replacement requirements listed in the above table may qualify for the listed incentive. Except for the Irrigation Pump VFD measure, fixed in place systems are not eligible for the incentives listed above.
2. All equipment listed in the table will be eligible for incentives only in replacement or retrofit projects.
3. For measures where the incentive is limited to 70% of energy efficiency measure costs, energy efficiency measure costs are subject to Pacific Power approval.
4. Incentives are paid at \$0.12/kWh annual energy savings. Irrigation Pump VFD annual energy savings subject to approval by Pacific Power.

VFD = Variable Frequency Drive

**Dairy/Farm Equipment Incentives Table**

<b>Equipment Type</b>	<b>Equipment Category</b>	<b>Minimum Efficiency Requirements</b>	<b>Customer Incentive</b>
Automatic Milker Takeoffs (Retrofit Only)	--	Equipment must be able to sense milk flow and remove milker when flow reaches a pre-set level. The vacuum pump serving the affected milking units must be equipped with a VFD to slow the vacuum pump's speed when demand for vacuum is reduced. Incentive available for retrofit only. Replacement of existing automatic milker takeoffs are not eligible for incentives, except where Pacific Power permits as a Custom Energy Efficiency Incentive.	\$235 each
Agricultural Engine Block Heater Timers	--	Timer must be a UL-listed device and rated for a minimum of 15 amps continuous duty.	\$10 each
Circulating Fans (See Note 2)	12-23" Diameter	Fans must achieve an efficiency level of 11 cfm/W	\$25/fan
	24-35" Diameter	Fans must achieve an efficiency level of 18 cfm/W	\$35/fan
	36-47" Diameter	Fans must achieve an efficiency level of 18 cfm/W	\$50/fan
	≥48" Diameter	Fans must achieve an efficiency level of 25 cfm/W	\$75/fan
Heat Reclaimers	--	Heat reclaimer must use waste heat from refrigeration compressor to heat water. Customer must use electricity to heat water.	\$220/condenser kW
High-efficiency Ventilation Systems	12-23" Diameter	Fans must achieve an efficiency level of 11	\$45/fan



(See Note 2)		cfm/W	
	24-35" Diameter	Fans must achieve an efficiency level of 13 cfm/W	\$75/fan
	36-47" Diameter	Fans must achieve an efficiency level of 17 cfm/W	\$125/fan
	≥48" Diameter	Fans must achieve an efficiency level of 19.5 cfm/W	\$150/fan
Milk Pre-coolers	--	The equipment must cool milk with well-water before it reaches the bulk cooling tank.	(See Note 3)
Programmable Ventilation Controllers	--	The equipment must control ventilation fans based on temperature or environmental settings.	\$20/fan controlled
Variable Frequency Drives for Dairy Vacuum Pumps (Retrofit Only)	--	The equipment must vary the motor speed in accordance with the air flow needs of the vacuum system. Incentive available for retrofit only for systems without an existing VFD.	\$165/hp

**Notes for Dairy/Farm Equipment Incentives Table:**

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Fan performance must be rated by an independent testing body in accordance with the appropriate ANSI/AMCA standards.
3. Incentives are paid at \$0.12/kWh annual energy savings + \$50/kW average monthly demand savings. Milk Pre-Cooler energy and demand savings subject to approval by Pacific Power.
4. Except where noted, all equipment listed in the table will be eligible for incentives in both new construction and retrofit projects.

AMCA = Air Movement & Control Association International, Inc.

ANSI = American National Standards Institute

VFD = Variable Frequency Drive

**Compressed Air Incentive Table**

<b>Equipment Category</b>	<b>Replace</b>	<b>With</b>	<b>Limitations</b>	<b>Customer Incentive</b>
Low-Pressure Drop Filters	Standard Coalescing Filter	Rated Low-Pressure Drop Filter where: 1. Pressure Loss at Rated Flow is $\leq$ 1psi when new and $\leq$ 3psi at element change 2. Particulate Filtration is 100% at $\geq$ 3.0 microns and 99.98% at 0.1 to 3.0 microns, with $\leq$ 5 ppm liquid carryover 3. Filter is of deep-bed "mist eliminator" style, with element life $\geq$ 5 years 4. Rated capacity of filter is $\leq$ 500 scfm	1. Compressor must be $\geq$ 25 HP and $\leq$ 75 HP	\$0.80/scfm
Receiver Capacity Addition	Limited or no Receiver Capacity ( $\leq$ 2 gallons per scfm of trim compressor capacity)	Total tank receiver capacity after addition must be $>$ 2 gallons per scfm of trim compressor capacity	1. Compressor system size $\leq$ 75 horsepower 2. Trim compressor must use load/unload controls without inlet modulation or on/off control. 3. Systems with a VFD or using variable displacement control are not eligible.	\$1.50/gallon above 2 gallons per scfm
Refrigerated Cycling Dryers	Non-Cycling Refrigerated Dryer	Cycling Refrigerated Dryer	1. Compressor system size $\leq$ 75 horsepower 2. Rated dryer capacity must be $\leq$ 500 scfm 3. Dryer must operate exclusively in cycling mode and cannot be equipped with the ability to select between cycling and non-cycling mode 4. Refrigeration compressor must cycle off during periods of reduced demand	\$1.50/scfm

VFD Controlled Compressor	Compressor 75 hp or Smaller	≤ 75 hp single operating VFD-Controlled Oil-Injected Screw Compressor	<ol style="list-style-type: none"> <li>1. Single operating compressor ≤ 75 HP</li> <li>2. Compressor must adjust speed as primary means of capacity control</li> <li>3. Compressor must not use inlet modulation when demand is below the minimum speed threshold of the VFD compressor</li> </ol>	\$0.15/kWh annual energy savings (up to 100% of EEM costs) See Note 3
Zero Loss Condensate Drains	Fixed Timer Drain	Zero Loss Condensate Drain (See Note 4)	Drain is designed to function without release of compressed air into the atmosphere. (No maximum compressor size)	\$90 each
Outside Air Intake	Compressor intake drawing air from compressor room	≤ 75 hp compressor where permanent ductwork between compressor air intake and outdoors	<ol style="list-style-type: none"> <li>1. Compressor system size ≤ 75 HP.</li> <li>2. Ductwork must meet manufacturer's specifications, which may include: (a) ≤ 0.25" W.C. pressure loss at rated flow, and (b) allow use of compressor room air during extremely cold conditions</li> </ol>	\$6.00/hp

**Notes for Compressed Air Incentive Table:**

1. Eligibility for the above Energy Efficiency Incentives, except Zero Loss Condensate Drains, is limited to customers with compressed air system(s) containing compressors with a total system horsepower less than or equal to 75 hp in size.
2. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
3. Incentives for VFD-controlled compressors are calculated based on compressor size and other system parameters at \$0.15/kWh annual energy savings. Energy savings subject to approval by Pacific Power.
4. Zero Loss Condensate Drains purchased as requirements for other compressed air Energy Efficiency Measures are eligible for incentives.
5. For measures where the incentive is limited to 100% of energy efficiency measure costs, energy efficiency measure costs are subject to Pacific Power approval.

HP = horsepower

PPM = parts per million

PSI = pounds per square inch

SCFM = Cubic Feet of air per Minute at standard conditions (14.5 psia, 68°F, and 0% relative humidity)

VFD = Variable Frequency Drive

**Incentives for Other Energy Efficiency Measures**

<b>Equipment Type</b>	<b>Replace</b>	<b>Minimum Efficiency Requirements</b>	<b>Customer Incentive</b>
Network PC Power Management Software	--	1. Installed software must automatically control the power settings of networked personal computers (PC) at the server level 2. The software must manage power consumption for each individual PC 3. The software must include the capability to report energy savings results	\$7 per controlled PC (up to 100% of measure costs)
Smart Plug Strip	--	1. Incentive applies to any plug strip that eliminates idle or stand-by power consumption of connected plug-load appliance through the use of an occupancy sensor, electric load sensor, or timer. 2. Applies only to electric plug-load applications (e.g. computer monitors, desk lamps, etc.)	\$15/qualifying unit

**Notes for Other Energy Efficiency Measures Incentives Table:**

1. Equipment that meets or exceeds the efficiency requirements listed for the equipment category in the above table may qualify for the listed incentive.
2. Energy Efficiency Measure Costs for Network PC Power Management Software are subject to Pacific Power approval.

**Schedule 115  
COMMERCIAL & INDUSTRIAL ENERGY EFFICIENCY INCENTIVES –  
OPTIONAL FOR QUALIFYING CUSTOMERS**

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PURPOSE:

Service under this Schedule is intended to maximize the efficient utilization of the electricity requirements of new and existing loads in Commercial Buildings and Industrial Facilities through the installation of Energy Efficiency Measures.

APPLICABLE:

To service under the Company's General Service Schedules 24, 33, 36, 40, 47T, 48T, 53 and 54 in all territory served by the Company in the State of Washington. This Schedule is applicable to new and existing Commercial Buildings and Industrial Facilities.

CUSTOMER PARTICIPATION:

Customer participation is voluntary and is initiated by following the participation procedures on the Washington energy efficiency program section of the Company Web site.

DESCRIPTION:

Ongoing program to provide incentives for a variety of equipment located in commercial buildings and industrial facilities. Periodic program changes will be made to insure or enhance program cost-effectiveness as defined by the Company.

QUALIFYING EQUIPMENT:

Equipment which when installed in an eligible facility results in verifiable electric energy efficiency improvement compared to existing equipment or baseline equipment as determined by the Company.

PROVISIONS OF SERVICE:

- (1) Qualifying equipment of services, incentive amounts, and other terms and conditions will be listed on the Washington energy efficiency program section of the Company Web site and may be changed by the Company with at least 45 days notice. Such changes will be prominently displayed on the Washington energy efficiency program section of the Company Web site and include a minimum 45 day grace period for processing prior offers.
- (2) Company may elect to offer EEM incentives through different channels and at different points in the sales process other than individual Energy Efficiency Incentive Agreement(s) prior to EEM purchase. The differences will depend on EEM and will be consistent for all EEMs of similar type.
- (3) Incentives may be offered year-round or for selected time periods.
- (4) Equipment or services receiving an incentive under this program are not eligible for incentives under other Company programs.

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**Schedule 115  
COMMERCIAL & INDUSTRIAL ENERGY EFFICIENCY INCENTIVES –  
OPTIONAL FOR QUALIFYING CUSTOMERS**

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PROVISIONS OF SERVICE: (continued)

- (5) Company may offer payment as described on the Washington energy efficiency program section of the Company Web site to a design team member to encourage early initial Company consultation on Owner/Customer design and plans for New Construction/Major Renovation.
- (6) Company will employ a variety of quality assurance techniques during the delivery of the program. They will differ by EEM and may include pre and post installation inspections, phone surveys, confirmation of Owner/Customer and equipment eligibility.
- (7) Company may verify or evaluate the energy savings of installed EEMs. This verification may include a telephone survey, site visit, review of facility operation characteristics, and pre- and post-installation of monitoring equipment and as necessary to quantify actual energy savings.

ELECTRIC SERVICE REGULATIONS:

Service under this Schedule will be in accordance with the terms of the Electric Service Agreement between the Customer and the Company. The Electric Service Regulations of the Company on file with and approved by the Utilities & Transportation Commission of the State of Washington, including future applicable amendments, will be considered as forming a part of and incorporated in said Agreement.

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## **Energy FinAnswer (Schedule 125)**

### **Years of Implementation**

The Energy FinAnswer program was originally implemented in the 1990s as an energy efficiency improvement financing program. Customer loan payments were calculated to ideally equal expected monthly savings from the energy efficiency improvements made until the loan was satisfied. The program was modified to an incentive based program, its current incarnation, under Schedule 125 in October 2000.<sup>3</sup>

### **Program Description**

The Energy FinAnswer program serves commercial, industrial, and agricultural customers for retrofits and new construction. The program includes a vendor neutral investment grade energy analysis and cash incentives equal to \$0.15 per kWh of annual energy savings plus \$50 per kW of average monthly demand savings (up to 60 percent of project costs).<sup>4</sup> There is a cap to prevent incentives from bringing the payback for a project below one year and a cap for lighting energy savings per project since lighting-only projects are included in FinAnswer Express. The program includes a post-installation verification and may require commissioning of dynamic measures. Commissioning requirements are provided as a component of the energy analysis. There are design assistance services and special incentives available for new construction and major renovation projects where energy code applies. The program is marketed primarily via PacifiCorp account managers, trade allies, Energy FinAnswer consultants and project staff. Other leads come via advertising in business publications, company newsletters, word-of-mouth, past participants returning for additional projects and a combination of other Company outreach efforts.

### **Planned Program Changes**

Accompanying this Business Plan update (under a separate advice request) is a proposed change to the Company's Energy FinAnswer program. The change is to add an incentive provision for co-funding of Energy Project Manager (EPM) positions at qualifying customer facilities. The purpose of EPM co-funding is to increase end user management and engineering manpower devoted to electrical energy projects/activities increasing the number of commercial and industrial projects that can be completed. EPM co-funding is performance based and contingent on customer's commitment to an energy savings goal over a prescribed timeframe; typically 12-24 months. Participating customers set a verifiable energy savings goal and receive co-funding proportionate to that goal (subject to a minimum co-funding level). If the customer meets these verified energy savings goals on schedule, co-funding continues. If however, milestones are missed, co-funding would be suspended and/or ultimately ended and repayment of unearned co-funding would be required.

The proposed change is in response to Order 02 of Docket UE-111880 which directs the Company, with input from stakeholders, to investigate conservation program design for large industrial customers and implement changes to the Company's program no later than November 1, 2012. The Commission directive originated from concerns raised by Boise White Paper, LLC (Boise White Paper) regarding business customer ability to take full advantage of the Company's energy efficiency programs.

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<sup>3</sup> Prior to October 2000, the program offered energy efficiency funding repaid with interest on the customer's electric bill.

<sup>4</sup> Note there are no incentive caps for new construction design assistance projects.

Over the last three months Pacific Power met with Boise White Paper and engaged in discussions about industrial conservation program design pursuant to Order 02. The Company worked with the Energy Engineer for Boise White Paper to identify barriers and needs in regards to conservation program participation and requirements and to identify the magnitude of the likely opportunities at the mill. During the discussions it was determined that a significant barrier to industrial customer participation is having the human resources to dedicate to the identification, cultivation and management of energy efficiency projects. Providing co-funding for dedicated energy project manager services will allow these customers to more aggressively pursue energy efficiency opportunities at their facilities by helping leverage the services and financial incentives available to them through PacifiCorp's programs.

While the EPM co-funding provision and incentive will be contained within the Schedule 125, the Energy FinAnswer program, qualifying projects can receive program services and incentives, depending on the nature of the project, through either Schedule 125 or Schedule 115, the FinAnswer Express program. This is intended to simplify the customer experience and provide savings qualification and verification tracks consistent with existing program parameters.

On September 10, 2012, the EPM concept/solution was co-presented by the Company and Boise White Paper to the Company's DSM Advisory Group at the Company's quarterly advisory group meeting. On September 12, 2012, a status update on the investigative process and proposed solution was provided the Commission through a compliance filing. On October 18, 2012 additional program information was shared with the DSM Advisory Group. **I**

On November 1, 2012, an advice filing was made with the Commission requesting approval to add the EPM co-funding provision to the Company's Energy FinAnswer program. Revised savings and expenditures associated with this program design modification are captured in the revised program forecasts in Table 1 of this update.

Evaluation Update

In 2012, the Company initiated process and impact evaluations for the Energy FinAnswer program in Washington for program years 2009-2010 available by year-end 2012.

***Last Evaluation Report:***

<b>Program Years</b> 2005 – 2008	<b>Evaluation Report Date</b> November 12, 2010	<b>Completed by</b> The Cadmus Group
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***Future Evaluation Report(s):***

<b>Program Years</b> 2009-2011 2012-2013	<b>Evaluation Report Date</b> By Year-end 2012 By Year-end 2014	<b>To be Completed by</b> Navigant Consulting Inc. Navigant Consulting Inc.
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Program Details

Program details for this program are contained in the program tariff. Any changes to the details included in the program tariff must be filed and approved by the Commission prior to becoming effective.



**Schedule 125  
COMMERCIAL & INDUSTRIAL ENERGY SERVICES – OPTIONAL FOR  
QUALIFYING CUSTOMERS**

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PURPOSE:

Service under this Schedule is intended to maximize the efficient utilization of the electricity requirements of new and existing loads in Commercial and Industrial Facilities by promoting the installation of Energy Efficiency Measures.

APPLICABLE:

To service under the Company's General Service Schedules 24, 33, 36, 40, 47T, 48T and 54 in all territory served by the Company in the State of Washington. This Schedule is not applicable to existing Commercial Buildings under 20,000 square feet. Square footage is the total Building or Facility area served by the Company's meter(s).

DEFINITIONS:

**Annual kWh Savings:** The annual kilowatt-hour (kWh) savings resulting from installation of the Energy Efficiency Measures, as estimated by Company using engineering analysis.

**Average Monthly kW Savings:** The Average Monthly kilowatt (KW) savings resulting from the installation of Energy Efficiency Measures as estimated by Company using engineering analysis as described below:

Average monthly KW Savings = (baseline average monthly kW - proposed average monthly kW), where:

- Average monthly kW = sum of the 12 Monthly Maximum kW/12, where
- Monthly Maximum kW = highest of all 15 minute average kW (as determined below)
- 15 minute average kW = sum of kWh used over 0.25 hrs /0.25 hrs

**Baseline Level:**

**Baseline Adjustments:** Company may adjust baseline electric energy consumption and costs during engineering analysis to reflect any of the following: energy codes, standard practice, changes in capacity, changes in production or facility use and equipment at the end of its useful life. For existing fixtures, baseline wattages for all fluorescent lighting Energy Efficiency Measures in all facilities shall be the lesser of existing equipment or the energy efficient magnetic ballast and energy saving lamp combination listed in the lighting table available on the Washington energy efficiency program section of the Company web site.

**Commercial Building:** A structure that is served by Company and meets the applicability requirements of this tariff at the time an Energy Efficiency Incentive Agreement is executed which does not meet the definition of an Industrial Facility.

**Commissioning:** The process of verifying and documenting that the performance of electric energy using systems meets the design intent and owner's operational requirement.

**Customer:** Any party who has applied for, been accepted and receives service at the real property, or is the electricity user at the real property.

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**Schedule 125  
COMMERCIAL & INDUSTRIAL ENERGY SERVICES – OPTIONAL FOR  
QUALIFYING CUSTOMERS**

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**DEFINITIONS:** (continued)

**Energy Efficiency Incentive:** Payment of money made by Company to Owner or Customer for installation of an Energy Efficiency Project pursuant to an executed Energy Efficiency Incentive Agreement.

**Energy Efficiency Incentive Agreement:** An agreement between Owner or Customer and Company providing for Company to furnish Energy Efficiency Incentive with respect to Energy Efficiency Project pursuant to this tariff schedule.

**Energy Efficiency Measure (EEM):** A permanently installed measure specified in an Energy Efficiency Incentive Agreement which can improve the efficiency of the Customer's electric energy use. EEMs designed to primarily reduce Average Monthly kW must also reduce electric energy use to be eligible for Energy Efficiency Incentives.

**Energy Efficiency Measure (EEM) Cost:** New construction: EEM Cost is the total installed cost of the energy efficient equipment or system minus the cost of the code compliance/common practice equipment or system.

Major Renovation: EEM Cost is the total installed cost of the energy efficient equipment or system minus the cost of the code compliance/common practice equipment or system.

Retrofit: EEM Cost is the total installed cost of the energy efficiency equipment or modification.

In the case of new construction, major renovation and retrofits, EEM Costs shall mean the Owner or Customer's reasonable costs incurred (net of any discounts, rebates or incentives other than Energy Efficiency Incentives from the Company, or other consideration that reduces the final actual EEM Cost incurred by the Owner or Customer) to purchase and install EEMs at the Owner or Customer's facility. If the Owner or Customer installs the EEM then the cost of installation shall be equal to the Owner's or Customer's actual labor costs for such installation.

For Energy Efficiency Projects involving EEM(s) that save both natural gas and electricity where the Owner or Customer can reasonably expect to receive an incentive from their gas company, the EEM Cost will be pro-rated prior to calculating the Energy Efficiency Incentive. This does not apply to design assistance projects.

**Energy Efficiency Project:** One or more EEM(s) covered by one Energy Efficiency Incentive Agreement. Annual kWh and Average Monthly kW savings for an Energy Efficiency Project shall be the sum of the individual EEM values.

**Energy Efficiency Project Cost:** Energy Efficiency Project cost shall be the sum of the individual EEM costs.

**Industrial Facility:** Buildings and process equipment associated with manufacturing.  
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**Schedule 125  
COMMERCIAL & INDUSTRIAL ENERGY SERVICES – OPTIONAL FOR  
QUALIFYING CUSTOMERS**

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DEFINITIONS: (continued)

**Mixed Use:** Buildings served by a residential schedule and a rate schedule listed under **Applicable** shall be eligible for services under this schedule provided the Energy Efficiency Project meets the definition of New Construction or Major Renovation.

**New Construction:** A newly constructed facility or newly constructed square footage added to an existing facility.

**Major Renovation:** A change in facility use type or where the existing system will not meet Owner/Customer projected requirements within existing square footage.

**Owner:** The person who has both legal and beneficial title to the real property specified in an Energy Efficiency Incentive Agreement or Energy Services Agreement or who is the mortgagor under a duly recorded mortgage or the grantor under a duly recorded deed of trust or a purchaser under a duly recorded agreement with respect to such real property.

**Retrofit:** Changes, modifications or additions to systems or equipment in existing facility square footage.

**Supplemental Services Agreement:** An agreement between Owner or Customer and Company providing for Company to furnish Supplemental Services with respect to Supplemental Services section of this Tariff Schedule.

INCENTIVES FOR ENERGY EFFICIENCY PROJECTS:

**Energy Efficiency Incentives:** The Energy Efficiency Incentive made by the Company for installation of EEMs pursuant to an Energy Efficiency Incentive Agreement shall be the **lesser** of the sum of (a) and (b) **OR** (c):

- (a) \$0.15/kWh for the Energy Efficiency Project Annual kWh savings as determined using Company provided or approved engineering analysis;
- (b) \$50/kW for the Energy Efficiency Project Average Monthly kW savings determined using Company provided or approved engineering analysis.
- (c) 60 percent of the Energy Efficiency Project Cost as determined by the Company.

Energy Efficiency Projects are eligible for Energy Efficiency Incentives per Table 1.

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**Schedule 125  
COMMERCIAL & INDUSTRIAL ENERGY SERVICES – OPTIONAL FOR  
QUALIFYING CUSTOMERS**

**Table 1**

Program track	Design Assistance	Standard	Standard	Standard
Project Scope	Comprehensive	System	System	System
Type	New Construction/ Major renovation	New Construction/ Major renovation	New Construction/ Major renovation	Retrofit
Energy code	Yes	Yes	No	No
<b>Owner/Customer Energy Efficiency Incentive caps applied to the Energy Efficiency Project</b>				
60 % of project	No	Yes	Yes	Yes
1 yr simple	No	Yes	Yes	Yes
Lighting savings	No	50%	50%	50%
Energy savings	Must exceed code by	Qualifying equipment	none	none
<b>Design team incentives</b>				
Honorarium	Yes	Yes	Not available	Not available
Design Incentive	Based on project size	Not available	Not available	Not available

All proposed Energy Efficiency Measure costs are subject to Company review and approval prior to offering an Energy Efficiency Incentive Agreement. All final Energy Efficiency Measure costs are subject to Company review and approval prior to paying an Energy Efficiency Incentive per the terms of an Energy Efficiency Incentive Agreement. Company review and approval of Energy Efficiency Measure costs may require additional documentation from the Customer or Owner.

For the purposes of calculating maximum annual electric savings resulting from lighting, electric savings resulting from lighting interaction with mechanical equipment and from lighting controls will be considered to be lighting savings.

The ten percent whole building energy savings threshold shall be calculated as follows: The Energy Efficiency Project must reduce the proposed electric energy consumption by at least 10% when compared to the baseline level of whole building electric consumption that would have resulted under the current Washington energy code. The date of the building permit application shall establish the current version of the code.

(continued)

**Issued:** May 13, 2011  
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**Effective:** June 13, 2011

**Issued By Pacific Power & Light Company**

By: Andrea Kelly Andrea L. Kelly

**Title:** Vice President, Regulation

**Schedule 125  
COMMERCIAL & INDUSTRIAL ENERGY SERVICES – OPTIONAL FOR  
QUALIFYING CUSTOMERS**

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INCENTIVES FOR ENERGY EFFICIENCY PROJECTS: (continued)

The Customer or Owner may receive only one financial incentive from the Company per EEM. Design team incentives are available per Table 1 and the terms posted on the Washington energy efficiency program page of the Company web site.

PROVISIONS OF SERVICE:

(1) **Energy Analysis**

Company shall meet with Customer or Owner and any design team and may perform an initial site visit/plans review to determine what EEMs may be appropriate for an energy analysis.

(2) **Supplemental Services**

Company may offer Supplemental Services beyond those described elsewhere in this Tariff Schedule through a Supplemental Services Agreement. Supplemental services shall include, but are not limited to: detailed design, life cycle costs calculations or compliance documentation for green or high performance building standards. Company will negotiate the amount and terms of the supplemental services on a project specific basis and may require any or all of the following: installation of EEMs delivering a certain amount of annual kWh savings, offset of a portion of the available incentive or direct reimbursement of a portion (up to 100%) of the direct Company costs for the service provided.

(3) **EEM Inspection**

Company will inspect any EEMs which are funded by or installed under this program. Satisfactory inspection by Company will be required prior to receiving Energy Efficiency Incentives specified in the Energy Efficiency Incentive Agreement.

(4) **EEM Commissioning**

Company will require that EEMs as specified in the Energy Efficiency Incentive Agreement be commissioned prior to receiving Energy Efficiency Incentives specified in the Energy Efficiency Incentive Agreement.

(4a) **Commissioning Opt-Out:** Required EEM Commissioning may be omitted with the following adjustments. Annual kWh savings, Average Monthly kW savings and eligible EEM Costs will all be reduced by 20% prior to calculation of the eligible Energy Efficiency Project Incentive. EEMs where the Owner or Customer has "opted-out" of EEM Commissioning that are later commissioned are not eligible for an additional incentive after the Energy Efficiency Project Incentive is paid.

(5) **Measure Performance Verification/Evaluation**

Company may verify or evaluate the energy savings of installed Energy Efficiency Measures specified in the Energy Efficiency Incentive Agreement. This verification may include a telephone survey, site visit, review of plant operation characteristics, and pre- and post-installation of monitoring equipment as necessary to quantify actual energy savings.

(continued)

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**PACIFIC POWER & LIGHT COMPANY**

WN U-75

Original Sheet No. 125.6

**Schedule 125  
COMMERCIAL & INDUSTRIAL ENERGY SERVICES – OPTIONAL FOR  
QUALIFYING CUSTOMERS**

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**PROVISIONS OF SERVICE:** (continued)

(6) **Minimum Equipment Efficiency**

For Retrofit Energy Efficiency Projects, EEMs must meet minimum equipment efficiency levels and equipment eligibility requirements in Schedule 115 to be eligible for incentives available under this Schedule.

(7) **Prior Energy Service program participation requirements and definitions:**

- Energy Efficiency Payments are not available to Owners after July 16, 2001. The elimination of the Energy Service Charge portion associated with Schedule 125 does not affect Energy Service Charges' currently outstanding and obligations pursuant to an executed Energy Services Agreement remain in effect until the Energy Efficiency Payment with interest is re-paid in full.
- **Energy Efficiency Payments:** Any payments of money made by Company to Owner for installation of EEMs pursuant to an Energy Services Agreement.
- **Energy Services Agreement:** An agreement between the Owner and the Company providing for Company to furnish or provide Energy Efficiency Payments with respect to EEMs pursuant to this Tariff Schedule.
- **Energy Services Charge:** As specified in the Energy Services Agreement, the monthly Energy Services Charge is that monthly payment required to repay the Energy Efficiency Payments, with interest at the Melded Interest Rate or the Performance Guarantee Interest Rate as applicable, in equal monthly payments over the term specified in the Energy Services Agreement.

(8) **Fuel Switching**

Energy Efficiency Incentives will not be made available to induce fuel switching by Owner.

(9) **Design team incentives**

Company may offer incentives to a design team member with current professional certification including architects and engineers. Incentives are available per Table 1 and include honorariums and design incentives.

Honorariums are designed to encourage early initial Company consultation on Owner/Customer's design and plans. Honorariums will be equally available to all professionally certified architects and engineers for Washington projects within Company's territory and will be limited to one honorarium per project.

Design incentives will be offered to all professional certified architects and engineers for Washington projects within Company's territory. Payment of incentives to the design team will require final construction documents include an efficient design meeting Company requirements. Incentives will be based on the square footage of the project and limited to one per project.

Additional conditions for design team incentives will be available on the Washington energy efficiency program section of the Company's web site and may be changed with 45 days notice posted on the web site.

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WN U-75

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**Schedule 125  
COMMERCIAL & INDUSTRIAL ENERGY SERVICES – OPTIONAL FOR  
QUALIFYING CUSTOMERS**

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RULES AND REGULATIONS:

Service under this Schedule is subject to the General Rules and Regulations contained in the tariff of which this Schedule is a part, and to those prescribed by regulatory authorities.

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By: Andrea Kelly Andrea L. Kelly

**Title:** Vice President, Regulation

## **Other Programs & Initiatives**

This section of the business plan includes information on the Company's new Energy Education in Schools program, a general "education only" program; Northwest Energy Efficiency Alliance ("NEEA"), an external group partly funded through Company dollars; Distribution Efficiency, efforts by the Company to improve the efficiency of its Washington based distribution system through voltage optimization ("VO"); and Production Efficiency, energy efficiency improvements at Company owned non-hydro generation facilities serving the Company's Washington territory.

### **Energy Education in Schools**

#### **Years of Implementation**

This is a new "education only" program replacing the previous "education and savings" program which ran from April, 2003 through June, 2012. The new "education only" program is currently being implemented with school presentations set to begin in February, 2013 (See "Year One Timeline" below under "Program Details"). Program costs are reflected Tables 1, 2 and 3 of this report. .

#### **Program Description**

PacifiCorp has contracted with the National Energy Foundation (NEF) to implement an Energy Education in Schools program during the 2012-13, 2013-14, and 2014-15 school years.

The elementary school offering is an "education only" program and will not directly contribute savings towards the Company's Washington 2012-2013 biennium target.

Program costs will fall under Paragraph (7)(d) in Order 01 of Docket UE-111880, Conservation Efforts without Approved EM&V Protocol, where the Company can spend up to ten (10) percent of its conservation budget on programs whose savings impact has not yet been measured provided the overall portfolio of programs still pass the Total Resource Cost as described in Paragraph (10)(a) of the same Order 01.

NEF is a non-profit corporation with over 36 years providing energy education and awareness. The mission of NEF is to "cultivate and promote an energy literate society".

#### **Planned Program Changes**

This is a new program therefore there are no planned changes at this time.

#### **Evaluation Information**

As this is an "education only" initiative, no third-party impact evaluation is anticipated beyond verification that the program is being delivered as reported. See "household audits cards" in "Program Details" section below.



### Program Details

The centerpiece of the program will be a series of 45 to 60 minute grade-level presentations focusing on energy literacy and energy efficiency. The targeted grade level will be 4<sup>th</sup> or 5<sup>th</sup> grade depending upon feedback from the state office of education. The school visit will include a custom designed presentation and hands-on group activities. Teachers will receive a packet of instructional materials in advance of the school presentations to assist with the energy literacy education. Program materials development is currently in progress.

The school presentations are being designed to get students “thinking” about energy and energy efficiency. In addition, an integrated follow-up to the school presentations will be provided through a home audit and household audit activity that is intended to provide students and their parents with an opportunity to “act” on the information they have learned. Students will be provided informational booklets and a household audit activity to be filled-out regarding the energy use and energy efficiency topics they were taught. Students will return the household audit report to their teachers, who will in turn submit them to NEF. NEF will provide teachers with an incentive to collect the household audit cards. Each teacher returning at least 80 percent of their students’ completed household audit cards will receive a \$50 mini-grant for their school. The data received will be summarized and reported to determine energy efficiency behavioral data and other program participation information.

### Program Metrics per Year

Total number of schools:	34-50
Total number of students:	approximately 4,000
Percent of eligible schools reached:	approximately 80%

### Anticipated Outcomes

- Teachers, students, and families will become more energy literate, particularly in the understanding of energy efficiency.
- Teachers, students, and families will learn the importance of being responsible energy stewards for the future of their community, state, country and planet.
- Teachers, students, and families will make a commitment to use energy more wisely at home, at school, at work, and in the community.
- A culture of energy efficiency will be developed among teachers, students, and families.
- Continuous program improvement from year to year as identified through reporting and lessons learned.

### **Year One Timeline**

<b>TASK</b>	<b>Aug</b>	<b>Sept</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>June</b>
Contact Depts. of Ed.	x										
Qualify School Lists		x									
Prep Enrollment Website			x								
Prep Promo Materials		x	x								
Conduct Promo/Enroll.				x	x	x					
Content Correlations	x	x									
Customize Materials		x	x	x							

Customize Presentation			x	x	x						
Recruit Add. Presenters			x	x	x						
Scheduling						x	x				
Materials Printed						x					
Presenter Training						x					
Fall Program Promo							x				
PR/Media Strategy Set						x	x				
Materials Shipped						x	x	x			
Presentations Conducted							<b>x</b>	<b>x</b>	<b>x</b>		
Fall Program Enroll									x	x	
Teacher Packet Due Date									x	x	
Packets Processed									x	x	
Mini-grants Mailed										x	x
Data Compiled										x	x
Teacher Communication				x	x	x	x	x	x	x	x
Reporting	Progress	x	x	x	x	x	x	x	x	x	FINAL

## **Northwest Energy Efficiency Alliance**

### **Years of Implementation**

The Northwest Energy Efficiency Alliance has been serving the Northwest region of Oregon, Washington, Idaho, and Montana since 1997.

### **Program Description**

NEEA is a non-profit corporation supported by, and working in collaboration with, the Bonneville Power Administration, Energy Trust of Oregon and more than 100 Northwest utilities (including PacifiCorp).

### **Program Details**

NEEA works in collaboration with its funders and other strategic market partners to accelerate the innovation and adoption of energy-efficient products, services, and practices.

For the 2010-2014 funding cycle, NEEA and the region are striving to achieve 200 aMW of total regional savings. PacifiCorp's Washington funding of NEEA's work represents 3.04 percent of the region's funding; approximately \$5.7 million over the five year period with expected savings attributed to PacifiCorp's Washington service area of roughly 6 aMW.

On October 16, 2012, NEEA provided the Company an update to the 2012-2013 savings forecast provided in Appendix 9 to the Company's 2012-2013 BCP. The results show that the Company is on track to meet its "Total Regional Savings less Local Programs" target for both 2012 and 2013. Overall the revised forecast suggests an increase of .19 aMW over NEEA's original 2012 – 2013 forecast. The increase is due to a combination of a shift in savings mix from the residential sector to commercial sector (decline in CFL and white goods but an increase in savings from 80 Plus and commercial codes) and a correction in the adjustment/forecast associated with local programs (Prior NEEA forecast inadvertently deducted code savings as if they were a part of Pacific Power's local programs).

In summary NEEA's plan to accomplish this goal includes:

- Building and leveraging relationships to influence the market
- Designing and executing strategic market interventions to expand the availability and demand for energy efficient products, services and practices
- Identifying, developing and advancing emerging opportunities to fill the pipeline for energy efficiency
- Delivering education and training to expand market capacity to deliver and maintain energy-efficient products, services and practices
- Facilitating regional coordination, collaboration and knowledge sharing to align interests and accelerate energy efficiency efforts
- Demonstrating and promoting the value of energy efficiency to increase demand
- Developing market intelligence and resources to help NEEA partners achieve their goals
- Advancing the adoption and implementation of increasingly efficient energy codes and standards to lock in long-term savings

NEEA has more than a dozen initiatives under way as outlined in their 2010-2014 Business Plan and Strategic Plan. More information on NEEA's initiatives, business and strategic plans can be found at the following on the NEEA website:

- Initiatives: [http://neea.org/news\\_media/mediaroom/neea\\_current\\_initiatives.pdf](http://neea.org/news_media/mediaroom/neea_current_initiatives.pdf)
- Business Plan: [http://neea.org/participate/docs/NEEA\\_BusinessPlan\\_Board-Approved.pdf](http://neea.org/participate/docs/NEEA_BusinessPlan_Board-Approved.pdf)
- Strategic Plan: [http://neea.org/participate/docs/NEEAStrategicPlan\\_FinalVersion.pdf](http://neea.org/participate/docs/NEEAStrategicPlan_FinalVersion.pdf)

## **Distribution Efficiency**

### Years of Implementation

The Company performed a detailed study of the potential energy savings from distribution efficiency ("DEI") 2010 to 2012. Total consultant costs were \$714,132. Pilot projects at two substations were undertaken in 2012. The energy savings prediction for 2012 projects has been reduced from 0.15aMW to 0.13aMW (-13.6%) due to more accurate analysis of the heating and cooling load characteristics in the project areas. The Company currently anticipates acquisition of all cost effective DEI energy savings in its Washington service territory ( $\leq 0.316$ aMW) by 2016.

For the 2012-13 biennium period, voltage optimization projects are being managed through a pilot. The Company is endeavoring to measure and verify total energy savings by using the simplified VO measurement and verification protocol approved by the Northwest Council's Regional Technical Forum ("RTF"). To date the results are not encouraging. While the improvements are expected to be beneficial, the measurement of the savings appears to be flawed due to inaccurate assumptions embedded in the protocol. Total project costs are also being tracked in an effort to corroborate cost estimates and determine actual cost effectiveness. The Company will use the results of the pilot to adjust its ten-year forecast as appropriate.

### Program Description

The Company's distribution efficiency effort is comprised of two elements, improving distribution system efficiency and lowering the average system voltage. Together these are referred to as voltage optimization or VO. Projects for 2012 include phase balancing and reactive power flow optimization on two circuits in Yakima and two circuits in Walla Walla. Additional projects for 2013 are expected to be similar in nature; the most effective scope and location of these improvements is currently being determined.

### Program Details

The following table identifies the predicted distribution efficiency projects in the 2012-13 biennium, together with some project details. The values shown are derived from the Company's detailed design estimates completed in 2012, the economic formula used in the Company's 2011 *Distribution System Efficiency and Voltage Optimization Study* and the VO factor analysis completed as part of the Company's 2012 *Washington Tier 2 Distribution Efficiency Study*.

<b>Project</b>	<b>Life Cycle Levelized Cost (\$/ MWh)</b>	<b>aMW Savings</b>	<b>Estimated Cost</b>	<b>Spend to Date</b>	<b>Description of Work</b>
Mill Creek VO	\$33.25	0.081	\$160,544	\$137,627	5 phase swaps, add 600kVAR, adjust LTC 124 to 119, M&V, correct low voltage issues after voltage is reduced.
Clinton VO	\$36.81	0.049	\$107,220	\$98,612	6 phase swaps, adjust LTC 121 to 119, M&V, correct low voltage issues after voltage is reduced.
2013 VO	< \$86.74	≤ 0.123	\$350,800	\$0	Project scope is currently being defined.
<b>Total</b>		≤ 0.25	\$618,564	\$236,239	

For specific information on PacifiCorp's forecasted savings attributed to VO for the 2012-13 biennium period, see the Company's BCP.

## **Production Efficiency**

### **Years of Implementation**

The Company began a detailed study of the potential energy savings from production efficiency (“PE”) in 2011; with the initial implementation of identified projects beginning in 2012. Final study work will be completed in 2012 and the Company anticipates the complete acquisition of cost effective PE energy savings in its Washington service territory by end of year 2017. This is a delay from an earlier estimate of 2014 but the larger projects (i.e. the condensate pump VFD’s) will be tied to plant overhauls due to the need for a plant outage to complete the work.

### **Program Description**

In 2011, the Company began studying potential energy efficiency upgrades to the electrical systems at the thermal and wind power production facilities. PacifiCorp (Company) fully owns one thermal plant that provides power to Washington State as well as four wind projects. The Company jointly owns two additional thermal plants that also provide power to Washington.

### **Program Details**

Project work will begin in 2012 starting at the Chehalis power plant for the current biennium. Also in the 2012-13 biennium the Company will work with joint owners at Hermiston and Jim Bridger to get identified projects approved for construction in the 2014-15 biennium. At the Goodnoe Hills wind project, the study showed no significant efficiency improvements available.

The following table details the specific projects identified for completion in this biennium.

<b>Description</b>	<b>2012 MWh/yr</b>	<b>2013 MWh/yr</b>	<b>Net Present Benefit (\$)</b>	<b>Total Resource Cost Test</b>
Lighting		246	\$161,292	1.15
Electric Heat Trace Runtime	39		\$25,244	1.47
Electric Heater Thermostat	37		\$24,334	33.80
Compressed Air Dryer Controls	29		\$21,969	5.77

## **Customer Outreach and Communications**

### **Years of Implementation**

In 2011, the Company implemented *wattsmart*, the demand-side management communication and outreach campaign. The *wattsmart* program was put into action to meet the program design principle conditions of Order 2 in Docket No. UE 100170 specific to energy efficiency program outreach.

### Program Description

The conditions for outreach for programs required PacifiCorp to establish a strategy for informing participants about program opportunities. The *wattsmart* communications campaign was designed to create awareness of the importance of being energy efficient, and to help increase participation in the company's demand-side management programs. The programs are funded through the system benefit charge adjustment (Schedule 191) collected on customer bills.

### Program Details

Provided in the table below is a summary of the media channels that were used to deliver the *wattsmart* campaign in 2011.

<b>Communication Channel</b>	<b>Value to Communication Portfolio</b>
Television	Advertisements were rotated, both 30-second and 15-second TV spots, with an average of 300 television placements each week from May through July 2011 and October through December 2011. Stations on which campaign spots were aired include: KAPP (ABC), KIMA (CBS), KNDO (NBC), KUNV(UNIV) and Charter (Cable). Estimated reach 93.6%, estimated frequency 21.96.
Radio	An average of 80 radio spots per week from May through July 2011 and October through December 2011. Radio stations on which campaign spots were aired include: KARY-FM (Oldies), KATS-FM (Classic Rock), KDBL-FM (Country), KFFM-FM (Contemporary Hits), KHHK-FM (Rhythmic CHR) KRSE-FM (Modern), KXDD-FM (Country), KZTA-FW (Mexican Regional) Estimated reach 78.9%, estimated frequency 9.5.
Newspaper	Newspaper placements included: Dayton Chronicle, The East Washingtonian, La Voz Hispanic News, The Waitsburg Times, Walla Walla Union Bulletin and Yakima Herald-Republic.
Web Site: Pacifipower.net/wattsmart Bewattsmart.com	Pacific Power's <i>wattsmart</i> website, pacificpower.net/wattsmart, and promotional URL bewattsmart.com link directly to the energy efficiency landing page and fulfill the campaign's call-to-action to engage customers in the Company's energy efficiency programs. These sites further support all other forms of communications by serving as a source for detailed information regarding the company's program and other energy efficiency opportunities.
Twitter	Other interactive campaign elements like online media and social media will work with traditional media to enhance the campaign by driving traffic to the program websites. Build awareness for early adopters regarding energy efficiency tips and post Tweets on a weekly basis.
Facebook	Facebook is used to build awareness for early adopters regarding

	energy efficiency tips and a location to share information. Information and tips posted three times a week.
Other Online	Supports the broadcast and print media while also increasing awareness for early adopters who are online and are likely to be receptive to energy saving messaging. Some of these uses include banner ads on local sites, blogs, behavioral ad targeting, and pay-per-click ad placements.
Magazine:	Content targeting business and metro area customers. Business publications included: Yakima Business Journal.

The objectives of the communications and outreach campaign in the 2012-13 biennium will be to increase awareness of the availability of energy efficiency programs, cash incentives and resources in order to boost participation and achieve demand reduction targets in Washington and promote customer conservation and increase participation and savings through Pacific Power *wattsmart* demand-side management programs.

The ongoing communications strategy will use an integrated communications approach to reach customers with program information effectively and efficiently throughout the year. Information will be disseminated through a combination of mass media advertising, bill statement communications, web communications, community outreach, public relations, retailer outreach, trade ally outreach/training, nonprofit energy assistance agencies, direct mail, social media and one-on-one contacts. These communications will be clear and consistent with our messaging to maximize all customer touch-points, tailor educational messages to the season and encourage customers to take action.

Communication tactics will implement an integrated advertising campaign featuring *wattsmart* energy efficiency messaging in the Yakima and Walla Walla market areas targeting residential, low-income and small/mid-size business customers. Program plans will utilize seasonal messaging of 15-second and 30-second TV spots developed in 2011 (including a Spanish language component), press releases, web/social media and working with third party marketers to incorporate *wattsmart* messaging in their communications to provide a consistent customer experience.



## **Cost Effectiveness**

Cost effectiveness of individual programs proposed for the 2012-13 biennium was assessed based on forecasted expenditures and energy savings reported in January 31, 2012 Business Plan – version 1.

Final cost-effectiveness at program and portfolio levels for 2012 will soon be provided in the Company’s 2012 Annual Report on Conservation Acquisition (March, 2013).

Cost-effectiveness of the Home Energy Reports program, introduced earlier this year, was provided in the June 1, 2012 Business Plan – version 2.

Revised cost-effectiveness of the Energy FinAnswer program reflecting the impact of adding the Energy Project Manager co-funding provision to the program will be provided in a separate advice filing to be made on or before November, 1, 2012. Revised expenditures and savings are reflected in this Business Plan in Table 1.

Overall the Conservation portfolio level costs (initiatives with no direct savings, excluding study costs associated with the Distribution and Production Efficiency portfolios) are down \$507,154 from the January, 2012, forecasted expenses (impact on portfolio economics provided in January is positive, no revised portfolio economics is warranted at this time).

<b>Initiative/Program</b>	<b>January</b>	<b>November</b>	<b>Change/Variance</b>
Energy Education	\$872,000	\$419,384	(\$452,616)
Customer Outreach/Communication	\$500,000	\$500,000	\$0
Program Evaluations	\$1,035,000	\$1,185,870	\$150,870
Potential Study Update	\$95,000	\$117,336	\$22,336
Measure data documentation	\$250,000	\$22,056	(\$227,944)
Res. Admin of prior programs	\$3,000	\$3,200	\$200
<b>Total</b>	<b>\$2,755,000</b>	<b>\$2,247,846</b>	<b>(\$507,154)</b>

For ease of reference, the cost-effectiveness of individual programs or initiatives for the 2012-13 biennium period are provided below in the following Program/Initiative order:

<b>Program/Initiative</b>	<b>Last Analysis Date</b>
Low Income Weatherization	January 27, 2012
See ya later, refrigerator®	January 27, 2012
Home Energy Savings	February 6, 2012
Home Energy Reports (Opower)	March 26, 2012
Energy FinAnswer	January 27, 2012
FinAnswer Express	January 27, 2012
Northwest Energy Efficiency (“NEEA”)	January 27, 2012
Distribution Efficiency Initiative	January 27, 2012
Production Efficiency Initiative	January 27, 2012

**Date:** January 27, 2012  
**To:** Don Jones, Jr.  
**From:** Aaron Jenniges and Niko Drake-McLaughlin  
**Re:** Washington Low Income Weatherization 2012-2013 Cost-Effectiveness

The tables below present the cost-effectiveness findings of the Washington Low Income Weatherization program based on 2012 and 2013 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled “Copy of CE inputs for Table 1 business plan 011312”. The analysis assumed a discount rate of 7.17%, based on the 2011 PacifiCorp Integrated Resource Plan.

Cost-effectiveness was tested using the IRP 49% west residential whole house load factor decrement. Table 1 lists modeling inputs.

The program is not cost-effective from the TRC, UCT, or RIM perspectives. The benefit/cost ratio for the RIM test is less than 1, indicating the program will have an upward influence on rates.

**Table 1: Low Income Weatherization Inputs**

Parameter	Value
Discount Rate	7.17%
Line Loss	8.87%
Residential Energy Rate (\$/kWh) (base year 2010)	\$0.0767
Inflation Rate <sup>5</sup>	1.8%

**Table 2: Low Income Weatherization Program Costs**

	Program Expenses (Non-Incentives)	Incentives	Total Utility Costs
Low Income Weatherization	\$214,240	\$1,433,760	\$1,648,000

<sup>5</sup> Used to escalate future year energy rates.

**Table 3: Low Income Weatherization Savings**

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Low Income weatherization	540,960	100%	540,960	100%	540,960	30

**Table 4: Low Income Weatherization Cost-Effectiveness**

	West Res Whole House 49%			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$1,648,000	\$890,917	(\$757,083)	0.54
Total Resource Cost Test (TRC) No Adder	\$1,648,000	\$809,924	(\$838,076)	0.49
Utility Cost Test (UCT)	\$1,648,000	\$809,924	(\$838,076)	0.49
Rate Impact Test (RIM)	\$2,279,226	\$809,924	(\$1,469,302)	0.36
Participant Cost Test (PCT)	\$1,433,760	\$2,064,986	\$631,226	1.44

However, these results do not incorporate the non-energy benefits that were analyzed in the 2006 program evaluation, including the Program's impact on forced mobility, arrearages, and economic impacts. These benefits are presented in Table 5.

**Table 5. Total Program Non-Energy Benefits**

Non-Energy Benefit	Program Impact	Perspective Adjusted
Mobility	\$39,783	TRC
Arrearage	\$18,187	UCT, RIM, TRC
Economic	\$311,630	TRC
<b>Total</b>	<b>\$369,599</b>	

These non-energy benefits are included in the cost-effectiveness results provided in the table below.

**Table 6: Low Income Weatherization Cost-Effectiveness with Non Energy Benefits**

	West Res Whole House 49%			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$1,648,000	\$1,260,516	(\$387,484)	0.76
Total Resource Cost Test (TRC) No Adder	\$1,648,000	\$1,179,523	(\$468,477)	0.72
Utility Cost Test (UCT)	\$1,648,000	\$828,111	(\$819,889)	0.50
Rate Impact Test (RIM)	\$2,279,226	\$828,111	(\$1,451,116)	0.36
Participant Cost Test (PCT)	\$1,433,760	\$2,064,986	\$631,226	1.44

**Date: January 27, 2012**  
**To: Don Jones, Jr.**  
**From: Aaron Jenniges and Niko Drake-McLaughlin**  
**Re: Washington See-Ya-Later Refrigerator 2012-2013 Program Cost-Effectiveness**

The tables below present the cost-effectiveness findings of the Washington See-Ya-Later Refrigerator program based on 2012-13 costs and gross savings estimates provided by PacifiCorp in a spreadsheet entitled “Copy of CE inputs for Table 1 business plan 011312”. The analysis assumed a discount rate of 7.17%, based on the 2011 PacifiCorp Integrated Resource Plan.

Cost-effectiveness was tested using the IRP 49% west residential whole house load factor decrement. Table 1 lists modeling inputs.

The program is cost-effective from the TRC, UCT and PCT perspectives. The benefit/cost ratio for the RIM test is less than 1, indicating the program will have an upward influence on rates.

**Table 1: See-Ya-Later Inputs**

Parameter	Value
Discount Rate	7.17%
Line Loss	8.87%
Residential Energy Rate (\$/kWh) (base year 2010)	\$0.0767
Inflation Rate <sup>6</sup>	1.8%

**Table 2: See-Ya-Later Program Costs**

	Program Expenses (Non-Incentives)	Incentives	Total Utility Costs	Net Participant Incremental Cost
Total	\$480,000	\$120,000	\$600,000	\$120,000

<sup>6</sup> Used to escalate future year energy rates.

**Table 3: See-Ya-Later Savings by Measure Type**

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings
Refrigerators	2,371,440	100%	2,371,440
Freezers	390,240	100%	390,240
Kits	85,100	100%	85,100
Total	2,846,780		2,846,780

**Table 4: See-Ya-Later Cost-Effectiveness, All Years, Entire Program**

			West Res Whole House 49%	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$600,000	\$1,551,083	\$951,083	2.59
Total Resource Cost Test (TRC) No Adder	\$600,000	\$1,410,076	\$810,076	2.35
Utility Cost Test (UCT)	\$600,000	\$1,410,076	\$810,076	2.35
Rate Impact Test (RIM)	\$2,304,832	\$1,410,076	(\$894,756)	0.61
Participant Cost Test (PCT)	\$120,000	\$1,824,832	\$1,704,832	15.21

**Date:** February 6, 2012  
**To:** Don Jones, Jr.  
**From:** Aaron Jenniges and Niko Drake-McLaughlin  
**Re:** Washington Home Energy Savings 2012-2013 Measure Cost-Effectiveness – Net Savings

The tables below present the cost-effectiveness findings of the Washington Home Energy Savings prospective measures based on 2012 and 2013 costs and net savings estimates provided by PacifiCorp in a spreadsheet entitled “Washington\_Savings\_Summary\_contract goal\_010412\_Scenario 1\_adjustment\_011012+DLJ”. The analysis assumed a discount rate of 7.17%, based on the 2011 PacifiCorp Integrated Resource Plan.

Measures were grouped according to the end-use. Cost-effectiveness was tested using the Medium IRP 49% west side residential whole house decrement. Table 1 lists common modeling inputs.

**Table 1: Home Energy Savings Inputs**

Parameter	Value
Discount Rate	7.17%
Line Loss	8.87%
Residential Energy Rate (\$/kWh) (base year 2010)	\$0.0767
Inflation Rate <sup>7</sup>	1.8%

**Table 2: Home Energy Savings – Program Costs**

	Program Expenses (Non-Incentives)	Incentives	Total Utility Costs
2012	\$658,469	\$912,366	\$1,570,825
2013	\$684,537	\$1,145,686	\$1,830,215
Total	\$1,343,006	\$2,058,052	\$3,401,040

<sup>7</sup> Used to escalate future year energy rates.

**Table 3: Home Energy Savings  
Savings by Measure Type**

Year	Measure Type	Measure Name	Gross kWh Savings	Net to Gross	Net kWh Savings
2012-2013	Appliance	Clothes Washer (MEF $\geq$ 2.46 & WF $\leq$ 4)	604,105	74%	446,454
		Clothes Washer Recycling	123,872	81%	99,965
		Dishwasher	49,102	130%	63,688
		Refrigerator	164,320	82%	134,230
		Electric Water Heater	66,364	74%	48,971
		Room Air Conditioner	15,359	81%	12,387
		Freezers	10,000	82%	8,169
		Heat Pump Water Heaters	81,412	81%	65,661
		<b>Total</b>	<b>1,114,533</b>		<b>879,524</b>
	Weatherization	Insulation - Attic	409,724	91%	372,077
		Insulation - Floor	491,706	89%	439,295
		Insulation - Wall	305,316	88%	267,809
		Windows Tier 1	79,030	76%	60,356
		Windows Tier 2	18,053	76%	13,787
		<b>Total</b>	<b>1,303,830</b>		<b>1,153,324</b>
	HVAC	Heat Pump Upgrade	436,847	81%	352,329
		Heat Pump Conversion	2,061,619	81%	1,662,751
		Duct Sealing and Insulation - Electric Heating	1,097,030	81%	884,784
		Duct Sealing and Insulation - Electric Cooling	31,696	81%	25,564
		Ductless Heat Pump - Single Head	1,489,923	81%	1,201,663
		<b>Total</b>	<b>5,117,116</b>		<b>4,127,091</b>
	New Homes	New Homes BOP	40,222	81%	32,459
		<b>Total</b>	<b>40,222</b>		<b>32,459</b>
	Lighting Non-CFL	Fixtures	46,300	93%	43,213
		<b>Total</b>	<b>46,300</b>		<b>43,213</b>
	Lighting CFL	LEDs	124,672	81%	100,551
		CFLs-Spiral	5,580,508	81%	4,500,830
		CFLs-Specialty	3,255,689	81%	2,625,801
		<b>Total</b>	<b>8,960,869</b>		<b>7,227,182</b>
	<b>2013 Total</b>			<b>16,582,869</b>	

**Table 4: Home Energy Savings Cost-Effectiveness, All Years, Entire Program**

	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$6,626,280	\$11,459,329	\$4,833,049	1.73
Total Resource Cost Test (TRC) No Adder	\$6,626,280	\$10,417,572	\$3,791,292	1.57
Utility Cost Test (UCT)	\$3,278,610	\$10,417,572	\$7,138,962	3.18
Rate Impact Test (RIM)	\$11,844,957	\$10,417,572	(\$1,427,385)	0.88
Participant Cost Test (PCT)	\$6,556,350	\$12,484,574	\$5,928,224	1.90

**Table 5. Non-Energy Benefits**

Non-Energy Benefit	Non-Energy Benefits per Measure	2012 Installs	2013 Installs	Measure Life	NTG	Total Present Value Net Benefits <sup>8</sup>
Clothes Washer (MEF $\geq$ 2.46 & WF $\leq$ 4)	\$81.00	1,571	2,058	14	74%	\$1,939,004
Dishwasher	\$0.31	508	752	12	130%	\$4,039
Total						\$1,943,042

The results of the appliances analysis with these non-energy benefits incorporated in the cost-effectiveness analysis for appliances are shown in Table 12.

**Table 6: Appliance with Non-Energy Benefits**

	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$1,187,783	\$2,840,952	\$1,653,168	2.39
Total Resource Cost Test (TRC) No Adder	\$1,187,783	\$2,759,323	\$1,571,540	2.32
Utility Cost Test (UCT)	\$364,092	\$816,281	\$452,190	2.24
Rate Impact Test (RIM)	\$1,040,391	\$816,281	(\$224,110)	0.78
Participant Cost Test (PCT)	\$1,518,500	\$3,166,245	\$1,647,745	2.09

Similarly, the results of the overall program with non-energy benefits included are shown in table 13.

<sup>8</sup> Benefits have been adjusted for net-to-gross.



**To: Jeff Bumgarner, PacifiCorp/Rocky Mountain Power**

**From: Justin Spencer, David Basak, Ryan Powanda, Navigant**

**Date: March 26, 2012**

**Re: OPOWER Program Cost Effectiveness and Program Design – Washington**

Navigant has developed this memo in response to PacifiCorp’s proposed OPOWER program cost effectiveness modeling needs in the state of Washington.

This memo presents the cost effectiveness results of two separate scenarios for the state of Washington. Scenarios 1 and 2 are the expected and guaranteed results using modeled assumptions provided by OPOWER. These scenarios utilize the following assumptions:

- **Avoided Costs:** Scenarios 1 and 2 use the “Medium” carbon cost decrement value stream provided in the 2011 PacifiCorp Integrated Resource Plan.
- **Modeling Inputs:** Navigant utilized measure savings and costs provided by OPOWER to PacifiCorp.
- **OPOWER Discount** – A 2-4% discount of program savings was used based on overlap with existing OPOWER rebate programs
- **Net-to-Gross:** Along with OPOWER’s discount, an additional Net-to-Gross Ratio of 93% was used to account for a conservative estimate of 7% attribution to other DSM programs.
- **Incremental Costs:** \$0 incremental costs were assumed for customers, because all net impacts are assumed to be zero-cost behavioral actions
- **Lifetime:** This analysis made a conservative assumption of a one-year measure life associated with behavioral measures.

Navigant has calculated total PY 2012-2015 results for each of the two scenarios.

**Table 5 –Cost Effectiveness Analysis Inputs**

Parameters	Values
Discount Rate for all B/C Tests	7.17%
Line Loss Factor - Energy (%) WA	8.87%
Residential Energy Rate (\$/kWh)	\$0.079
Net-to-Gross Ratio	93%
Escalation Rate	1.8%

**Table 2 –Annual Program Savings at Generator for PY 2012-2015 in MWh (Source: OPOWER)**

Scenario	Year				
	2012	2013	2014	2015	Total
1 - Expected Result (Gross)	1,376	5,390	5,945	5,673	18,384
1 - Expected Result (Net)	1,280	5,013	5,529	5,276	17,097
2 - Guaranteed Result (Gross)	1,102	4,317	4,761	4,543	14,723
2 - Guaranteed Result (Net)	1,025	4,015	4,428	4,225	13,693

**Table 3 –Annual Program Costs for PY 2012-2015 (Source: OPOWER)**

Scenario	Year				
	2012	2013	2014	2015	Total
1 - Expected Result	\$96,668	\$132,119	\$185,119	\$200,119	\$614,023
2 - Guaranteed Result	\$96,668	\$132,119	\$185,119	\$200,119	\$614,023

The total PY 2012-2015 cost/benefits results are as follows:

**Table 4 –Total PY 2012-2015 Cost/Benefit Test Results**

Benefit/Cost Test Performed	Scenario 1 Expected - 2012-2015			Scenario 2 Guaranteed - 2012-2015		
	Costs	Benefits	B/C Ratio	Costs	Benefits	B/C Ratio
Total Resource Cost Test (TRC)	\$614,025	\$1,394,421	2.27	\$614,025	\$1,116,754	1.82
Total Resource Cost Test (PTRC)	\$614,025	\$1,533,863	2.50	\$614,025	\$1,228,430	2.00
Societal Cost Test (SCT)	\$614,025	\$1,394,421	2.27	\$614,025	\$1,116,754	1.82
Utility Cost Test (UCT)	\$614,025	\$1,394,421	2.27	\$614,025	\$1,116,754	1.82
Rate Impact Test (RIM)	\$1,870,639	\$1,394,421	0.75	\$1,620,414	\$1,116,754	0.69
Levelized Cost (\$/kWh)	\$614,025	\$14,904,406	\$0.041	\$614,025	\$11,936,542	\$0.051

It should be emphasized that these results assume that ALL measures implemented are zero-cost behavioral measures, net of 9-11% attributed to other, presumably equipment-focused programs. All of these behavioral measures are assumed to have zero cost and only one year of measure life. Any equipment installations would have incremental costs and longer lifetimes that would need to be considered in a benefit-cost analysis. The actual fraction of savings attributable to equipment installations is a matter of some debate within the DSM industry at this time, with estimates ranging from 0 to 50%. Including equipment installations would likely increase costs more than benefits, but this is uncertain at this time.

**Date: January 27, 2012**  
**To: Don Jones, Jr.**  
**From: Aaron Jenniges and Niko Drake-McLaughlin**  
**Re: Washington Energy FinAnswer 2012-13 Program Cost-Effectiveness**

The tables below present the cost-effectiveness findings of the Washington Energy FinAnswer program based on 2012 and 2013 costs and gross savings estimates provided by PacifiCorp in a spreadsheet entitled “Copy of CE inputs for Table 1 business plan 011312”. The analysis assumed a discount rate of 7.17%, based on the 2011 PacifiCorp Integrated Resource Plan.

Cost-effectiveness was tested using the 2011 IRP 71% west system load factor decrement. Table 1 lists modeling inputs.

**Table 6: Energy FinAnswer Inputs**

Parameter	Value
Discount Rate	7.17%
Commercial Line Loss	8.73%
Industrial Line Loss	7.54%
Commercial Energy Rate (\$/kWh) (base year 2010)	\$0.0688
Industrial Energy Rate (\$/kWh) (base year 2010)	\$0.0577
Inflation Rate <sup>9</sup>	1.8%

**Table 7: Energy FinAnswer - Total Program Costs**

	Program Expenses (Non-Incentives)	Incentives	Total Utility Costs
Additional Measures	\$155,875	\$143,885	\$299,760
HVAC	\$289,963	\$267,658	\$557,621
Lighting	\$264,552	\$244,201	\$508,753
Motors	\$223,967	\$206,739	\$430,706
Refrigeration	\$1,986,645	\$1,833,826	\$3,820,471
Building Shell	\$67,808	\$62,592	\$130,400

<sup>9</sup> Used to escalate future year energy rates.

Compressed Air	\$117,670	\$108,619	\$226,289
Total	\$3,106,480	\$2,867,520	\$5,974,000

**Table 8: Energy FinAnswer Savings by Measure Type**

		Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Measure Life
Industrial Measures	Additional Measures	1,033,437	94%	971,430	100%	14
	HVAC	1,023,305	94%	961,907	100%	14
	Lighting	405,269	94%	380,953	100%	14
	Motors	810,538	94%	761,906	100%	14
	Refrigeration	13,171,251	94%	12,380,975	100%	14
	Compressed Air	780,143	94%	733,334	100%	14
	Total	17,223,943		16,190,506		
Commercial Measures	Building Shell	399,086	100%	399,086	100%	14
	HVAC	798,171	100%	798,171	100%	14
	Lighting	1,197,257	100%	1,197,257	100%	14
	Motors	598,629	100%	598,629	100%	14
	Total	2,993,143		2,993,143		
All Measures	Total	20,217,086		19,183,649		

**Table 9: Energy FinAnswer Cost-Effectiveness, All Years, Entire Program**

	West System 71%			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$9,373,777	\$19,892,197	\$10,518,420	2.12
Total Resource Cost Test (TRC) No Adder	\$9,373,777	\$18,083,815	\$8,710,039	1.93
Utility Cost Test (UCT)	\$5,974,000	\$18,083,815	\$12,109,815	3.03
Rate Impact Test (RIM)	\$18,072,835	\$18,083,815	\$10,980	1.00
Participant Cost Test (PCT)	\$6,267,297	\$14,966,355	\$8,699,058	2.39

**Date: January 27, 2012**  
**To: Don Jones, Jr.**  
**From: Aaron Jenniges and Niko Drake-McLaughlin**  
**Re: Washington FinAnswer Express 2012-2013 Cost-Effectiveness**

The tables below present the cost-effectiveness findings of the Washington FinAnswer Express program based on projected 2012 and 2013 costs and gross savings estimates provided by PacifiCorp in a spreadsheet entitled “2011 forecast 7-31-2011 WA 8-25-2011rev”. The Utility discount rate is from the 2011 PacifiCorp Integrated Resource Plan.

Cost-effectiveness was tested using the 2011 IRP 71% west system load factor decrement. Table 10 lists modeling inputs, and Table 2 shows the annual cost and savings information provided by PacifiCorp. Table 3 provides measure lives for each bundle, provided by PacifiCorp, as well as realization rates for each bundle’s savings values, taken from the 2005-2008 program evaluation. Table 13 outlines the administrative costs.

Overall, the FinAnswer Express program is cost-effective, passing all five standard cost-benefit tests. Additionally, each component measure bundle is cost-effective as well. Results are shown for the 2012 and 2013 program years combined.

**Table 10: FinAnswer Express Inputs**

Parameter	Value
Discount Rate	7.17%
Commercial line loss	8.73%
Industrial line Loss	7.54%
Commercial Energy Rate (\$/kWh) (base year 2010)	\$0.0688
Industrial Energy Rate (\$/kWh) (base year 2010)	\$0.0577
Inflation Rate <sup>10</sup>	1.8%

<sup>10</sup> Used to escalate future year energy rates.

**Table 11: FinAnswer Express Annual Costs and Savings by Year and Measure Type**

FinAnswer Express	End Use	Gross kWh Savings	Gross KW Savings	Incentives	Participant Incremental Cost
2012	Appliances	21,968	1	\$2,000	\$4,796
	Compressed Air	288,600	14	\$43,576	\$99,107
	Envelope	9,272	1	\$4,768	\$9,914
	Dairy/Farm Equipment	55,500	14	\$7,565	\$15,677
	Food Service	219,126	57	\$32,170	\$78,147
	HVAC	253,608	73	\$47,424	\$160,700
	Irrigation	210,900	142	\$17,652	\$54,436
	Lighting Equipment	4,999,744	992	\$329,251	\$1,873,714
	Motors	493,430	9	\$31,075	\$90,468
	Other Equipment	11,480	1	\$1,030	\$1,480
	Non Trade-Ally (project manager projects)	359,029	111	\$35,903	\$95,273
	2012 Total (w/ Admin Cost)	6,922,657	1,415	\$552,413	\$2,483,712
2013	Appliances	29,714	2	\$2,825	\$6,857
	Compressed Air	296,400	14	\$44,754	\$101,785
	Envelope	19,059	1	\$8,463	\$18,602
	Dairy/Farm Equipment	57,000	14	\$7,769	\$16,100
	Food Service	235,064	61	\$34,960	\$83,243
	HVAC	279,891	82	\$52,420	\$178,523
	Irrigation	216,600	146	\$18,129	\$55,907
	Lighting Equipment	5,249,732	1,042	\$345,713	\$1,967,400
	Motors	503,959	11	\$31,800	\$92,337
	Other Equipment	13,100	1	\$1,100	\$1,600
	Non Trade-Ally (project manager projects)	180,532	114	\$18,053	\$47,906
	2013 Total (w/ Admin Cost)	7,081,050	1,488	\$565,987	\$2,570,260
All Years	Appliances	51,682	3	\$4,825	\$11,653
	Compressed Air	585,000	28	\$88,330	\$200,892
	Envelope	28,331	2	\$13,231	\$28,516
	Dairy/Farm Equipment	112,500	28	\$15,334	\$31,777
	Food Service	454,190	118	\$67,130	\$161,390
	HVAC	533,499	155	\$99,844	\$339,223
	Irrigation	427,500	288	\$35,781	\$110,343
	Lighting Equipment	10,249,476	2,034	\$674,964	\$3,841,114
	Motors	997,389	20	\$62,875	\$182,805
	Other Equipment	24,580	2	\$2,130	\$3,080
	Non Trade-Ally (project manager projects)	539,561	225	\$53,956	\$143,179
	All Years Total (w/ Admin Cost)	14,003,707	2,903	\$1,118,400	\$5,053,972

**Table 12: FinAnswer Express Measure Lives and Realization Rates by Measure Type**

End Use	Measure Life	Realization Rate
Appliances	9	0.97
Compressed Air	9	0.97
Envelope	20	0.97
Dairy/Farm Equipment	10	0.97
Food Service	12	0.97
HVAC	15	0.72
Irrigation	5	0.97
Lighting Equipment	14	0.98
Motors	15	1.54
Other Equipment	5	0.97
Non Trade-Ally (project manager projects)	14	0.97

**Table 13: Program Costs**

Year	Program Expenses (Non-Incentives)	Incentives	Total
2012	\$917,587	\$552,413	\$1,470,000
2013	\$899,483	\$565,987	\$1,465,470
Total	\$1,817,070	\$1,118,400	\$2,935,470

**Table 14: FinAnswer Express Cost-Effectiveness, All Years, Entire Program**

FinAnswer Express - Total Program	West System 71% (2011 medium)			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$6,638,905	\$14,291,629	\$7,652,724	2.15
Total Resource Cost Test (TRC) No Adder	\$6,638,905	\$12,992,390	\$6,353,485	1.96
Utility Cost Test (UCT)	\$2,837,426	\$12,992,390	\$10,154,964	4.58
Rate Impact Test (RIM)	\$11,178,250	\$12,992,390	\$1,814,140	1.16
Participant Cost Test (PCT)	\$4,882,014	\$9,421,358	\$4,539,344	1.93

**Date:** January 27, 2012  
**To:** Don Jones, Jr.  
**From:** Aaron Jenniges and Niko Drake-McLaughlin  
**Re:** Washington NEAA 2012-2013 Cost-Effectiveness

The tables below present the cost-effectiveness findings of the Washington NEAA funding based on 2012-13 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled “Appendix 9 NEEA PAC Report\_Savings\_Summary v3+ measure life for CE 011312”. The analysis assumed a discount rate of 7.17%, based on the 2011 PacifiCorp Integrated Resource Plan.

Cost-effectiveness was tested using the IRP 49% west residential whole house load factor decrement. Table 1 lists modeling inputs.

The program is cost-effective from the TRC, PCT, and UCT perspectives. The benefit/cost ratio for the RIM test is less than 1, indicating the program will have an upward influence on rates.

**Table 1: NEEA Inputs**

Parameter	Value
Discount Rate	7.17%
Line Loss	8.87%
Residential Energy Rate (\$/kWh) (base year 2010)	\$0.0767
Inflation Rate <sup>11</sup>	1.8%

**Table 2: NEEA Annual Program Costs**

	2012	2013	Total
Utility Costs	\$1,157,000	\$1,212,456	\$2,369,456

**Table 3: NEEA Savings**

	2012	2013	Total
Savings (kWh)	8,413,980	7,669,380	16,083,360

<sup>11</sup> Used to escalate future year energy rates.



**Table 4: NEEA Cost-Effectiveness**

	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$2,288,339	\$11,853,411	\$9,565,072	5.18
Total Resource Cost Test (TRC) No Adder	\$2,288,339	\$10,775,828	\$8,487,489	4.71
Utility Cost Test (UCT)	\$2,288,339	\$10,775,828	\$8,487,489	4.71
Rate Impact Test (RIM)	\$11,512,442	\$10,775,828	(\$736,614)	0.94
Participant Cost Test (PCT)	\$0	\$9,224,103	\$9,224,103	N/A

**Date: January 27, 2012**  
**To: Don Jones, Jr.**  
**From: Aaron Jenniges and Niko Drake-McLaughlin**  
**Re: Washington Distribution Efficiency Cost-Effectiveness**

The tables below present the cost-effectiveness findings of the Distribution Efficiency program based on projected 2012 and 2013 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled “DEI – proforma CE inputs – tie to Biz plan 012312.” Savings have been grossed to reflect line losses associated with this distribution system.

Table 15 shows the cost and savings assumptions.

**Table 15: Projects - Costs and Savings**

	Annual Energy Savings (MWh/yr)	Implementation Costs	PV O&M Costs	PV Benefits
2012	972.4	\$268,875	\$212,523	\$1,362,355
2013	2,058.6	\$750,000	\$0	\$825,000
Total	3,031.0	\$1,018,875	\$212,523	\$2,187,355

**Table 2: Distribution Efficiency**

	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$1,181,220	\$2,132,160	\$950,940	1.81
Total Resource Cost Test (TRC) No Adder	\$1,181,220	\$1,938,327	\$757,107	1.64
Utility Cost Test (UCT)	\$1,181,220	\$1,938,327	\$757,107	1.64



**Date:** January 27, 2012  
**To:** Don Jones, Jr.  
**From:** Aaron Jenniges and Niko Drake-McLaughlin  
**Re:** Washington Production Efficiency Cost-Effectiveness

The tables below present the cost-effectiveness findings of the Chehalis Plant projects based on projected 2012 and 2013 costs and savings estimates provided by PacifiCorp in the spreadsheet titled "Chehalis Economics - 12-12-11."

Table 15 shows the cost and savings assumptions for each project.

**Table 16: Projects - Costs and Savings**

	Measure Life	Annual Energy Savings (MWh/yr)	Installed Costs	EM&V Costs	Engineering Fees	Spare Parts Cost	Annual O&M Costs
Lighting (2013)	10	246	\$100,682	\$5,034	\$10,068	\$3,020	\$3,020
Electric Heat Trace Runtime (2012)	10	39	\$11,000	\$2,500	\$1,100	\$330	\$330
Electric Heater Thermostat (2012)	10	37	\$220	\$500	\$0	\$0	\$0
Compressed Air Dryer Controls (2012)	12	29	\$2,420	\$500	\$242	\$73	\$73

**Table 17: Production Efficiency, All Years, Entire Program**

	Costs	Benefits	Net Benefits	Benefit/ Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	\$152,252	\$222,047	\$69,795	1.46
Total Resource Cost Test (TRC) No Adder	\$152,252	\$201,861	\$49,609	1.33
Utility Cost Test (UCT)	\$152,252	\$201,861	\$49,609	1.33